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“IT SHOULD BE HEALTHY BUT IT SHOULD BE GOOD”: PERSPECTIVES OF STUDENTS AND STAFF  
ON THE NATIONAL SCHOOL LUNCH PROGRAM

by

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## ABSTRACT OF THE DISSERTATION

“It should be healthy but it should be good”: Perspectives of Students and Staff

on the National School Lunch Program

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The National School Lunch Program (NSLP) serves nearly 30 million students per day, many of whom regularly enjoy a healthy lunch at school. However, students often do not eat the parts of the meal considered the healthiest, and there are millions more children who do not take advantage of the program at all. If students leave the cafeteria hungry or do not eat healthy foods, the program has not fully fulfilled its ambition to “safeguard the health and well-being of the Nation’s children” (National School Lunch Act 1946). Building on the public administration concepts of street-level bureaucracy and co-production, this dissertation investigates the role of program providers and clients to better understand implementation of the NSLP and its ensuing outcomes. I use information from interviews with 45 staff members and 96 students across six school districts to suggest the factors that staff and students think contribute to students’ likelihood to take a school lunch and to eat healthy foods. I find that what staff provide and how they encourage students to participate and eat may not fully align with what students see as valuable in the program

or what will actually influence their behaviors. These findings suggest that school food service practitioners, advocates, and policymakers should consider a range of factors not always highlighted in research or discourse about school meals, but which can help explain why students do or do not eat at school and thus whether the goals of the NSLP are achieved. These findings also show that to better understand implementation of public programs, especially those requiring certain behaviors from clients, it is important to examine the activities and beliefs of both the program providers and recipients.

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## Chapter 1: Health and Hunger in the National School Lunch Program

### Composite Narrative #1 – Almost Time

*Lizzy sits in class, waiting for the bell to ring. It's almost lunchtime, and she's ready for a break. She can't remember what was on the menu for today. She's not really hungry, since it's only 11:05, but she still hopes it something she likes. Maybe it's the sweet potato wedges? Those are so good when you get the crispy ones.*

*In the cafeteria, Ms. Nancy is checking that everything is ready. "Mrs. Maria, did you get all the rice done?" "Oh, I've had it out for ages," she replies. "Mr. Gary, what about the grapes?" "Just cupping the last bunch." She walks out to the line and inspects the sandwiches – it takes a lot of work to wrap each one individually, but they look so nice and neat, piled up in their plastic wrapping. She hopes they made enough cheese pizza – she thinks the kids have been eating more of it than the pepperoni since they switched the brand. She always hates it when they run out of something a child asks for, and she especially doesn't want that to happen on a day when the district office is visiting.*

*Mr. Ellison, the menu planner from the district office, looks at the line too. He doesn't think the sandwiches look quite as good as they should when they're wrapped up, so he'll have to talk to Ms. Nancy about how her staff have been doing them. The carrot sticks help make the line pop though, in that bright packaging. He's going to have to try this new pizza again. The counts, especially for pepperoni, are down, and he doesn't know why. What makes a kid not want to eat pepperoni pizza?*

### Introduction

Every day, in thousands of schools across the US, adults make lunch for almost 30 million children. School food service staff must follow regulations, maintain nutrition standards, and stay within their budget while serving meals that students will eat. Students depend on school meals to get them through the school day, so that they can learn and participate from before the opening bell through after-school and evening

activities. These meals are especially important for the 11 million children living in families with low food security (Coleman-Jensen et al. 2019). The National School Lunch Program (NSLP) has become arguably the country's most popular social welfare program as well as its second-largest nutritional safety net (Levine 2008; "National School Lunch - Participation and Meals Served," n.d.).

But not all students look forward to their school lunch, and there are millions more who choose not to take advantage of school meals programs. While the NSLP is successful in many ways, there is more potential for it to fulfill its mandate as a policy to prevent student hunger and promote student health. It is students who ultimately decide whether or not the NSLP is a success, based on whether and what they eat – if students leave the cafeteria hungry or without eating any vegetables, the program has not fully achieved its goals. Feeding more students depends on understanding why they choose to eat lunch at school and how they decide which items to select and whether to eat them. Information from both students and adults can illuminate the many elements that influence students' eating behaviors at school and the wide range of factors affecting the success of the NSLP. From the food that is served to the environment of the cafeteria to cultural beliefs about nutrition, there are many determinants of students' decisions to participate in the meal program and what they select and eat. Understanding and attending to these various influences is necessary to make school lunch appealing to

students and thus further the NSLP's success in preventing student hunger and promoting student health.<sup>1</sup>

The research project presented in this dissertation asked school food service staff members and students for their thoughts about lunch at their school. Based on their answers, I suggest the factors that influence students as they decide whether to eat at school and what to eat if they do, and especially what encourages or discourages them from eating foods considered to be healthy. I compare these student perspectives on their lunchtime eating behaviors to the expectations of the food service staff who work in school districts and cafeterias. Although staff members and students often agree on the important elements of a school meal, sometimes they do not, and even when staff know what students want, they may be unable to provide it. These areas of disconnection highlight how staff and students could better align their perspectives on what the school lunch experience should be like and adjust their communication and activities in the cafeteria accordingly. Such attention to the meals provided and students' reactions should encourage more students to eat healthy foods at school – which is necessary to fulfilling the mandate of the NSLP.

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<sup>1</sup> This dissertation focuses on consumption of healthy foods as a determinant of students' current and future health (see footnote four below for more on the definition of "healthy foods"). While diet clearly plays a role in physical health, it is not the only factor. Contemporary health advice emphasizes eating right and exercise as the vehicles to improved personal well-being, while neglecting many of the other determinants of an individual's physical, mental, and social health such as the built environment, chemical exposure, stress levels, and isolation. Although what students eat can support their overall health, there are many other factors that will contribute to their current and future well-being and as such deserve greater attention in the school context.

*Safeguarding Children's Health*

In his statement upon signing the National School Lunch Act in 1946, President Harry Truman declared, "No nation is healthier than its children" (Peters and Wooley 2018, n.p.). From its inception, federal school meals policy has explicitly included a goal of promoting children's health through proper nutrition. The Act created the NSLP with the ambition "to safeguard the health and well-being of the Nation's children" (Richard B. Russell National School Lunch Act 1946).

Exactly how to do that has evolved over the NSLP's 70-year history. Initially, the main food-related health challenge facing America's children was undernutrition, the consumption of too few calories and nutrients, along with related diseases of nutrient deficiency. Initial nutrition guidelines directed school lunch practitioners to provide meals balanced among food components (i.e., milk, meat, fruit or vegetables, bread, and butter) which contained at least one-third of students' weekly nutritional needs (Poppendieck 2010; Levine 2008). Following new research in the 1980s and 1990s as well as changes to American diets, nutrition regulations for the program began to emphasize limiting certain nutrients, especially fat. By the turn of the century, concern about children's health had grown to include over-nutrition, the consumption of too many of the wrong kinds of macronutrients, and related diseases like diabetes.

Influenced by rising rates of childhood obesity in the early 2000s, parents, medical professionals, public health advocates, and military officials strongly lobbied the federal government to improve the school food environment (Harrington 2017). Congress passed the Healthy, Hunger-Free Kids Act (HHFKA) in 2010, which significantly updated nutrition regulations for school meals and the school food environment more broadly

(Healthy, Hunger-Free Kids Act 2010). Many school food authorities (SFA)<sup>2</sup> had already begun making changes to lunches by the time the new guidelines were implemented in school year (SY) 2012-13. With the HHFKA, all SFAs were required to make changes, most notably, to limit sodium, increase whole grains, and offer a greater quantity and variety of produce. The HHFKA also set nutrient regulations for all foods sold at school, beyond those considered a part of the school meal (e.g., in vending machines and at snack bars).

The HHFKA reflects the conviction that what students eat at school matters to their health and well-being. Children may eat school food 180 days of the year (some in the summer as well), up to four times a day.<sup>3</sup> For many students, particularly those living in food-insecure families, school food provides a significant portion of their daily nutrients (Huang and Barnidge 2015; Briefel et al. 2009). What children eat (or don't) at school can also influence their academic performance and the behaviors that support a positive school community and students' abilities to learn ("Making the Case for Healthy, Freshly Prepared School Meals" 2014; Weaver-Hightower 2011). Further, even for those children who don't participate in the program, the lunch and cafeteria experience are a source of messages about what a meal is, what foods are appropriate and when, and what eating is for (Weaver-Hightower 2011).

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<sup>2</sup> "School food authority" is the official terminology for the entity that runs a school's or schools' meal programs. Usually the SFA aligns with the school district (for example, Milwaukee Public Schools Food & Nutrition or Henrico County Public Schools Nutrition Service) and oversees the meal program in all schools in that district. Most decisions about the program are made by the SFA central office (e.g. about menus, staffing, vendors, and communications), with school-based staff responsible for execution.

<sup>3</sup> The NSLP is the most widely-used school meal program, available in close to 100,000 schools ("Facts: National School Lunch Program," n.d.). About 95% of schools offer breakfast through the School Breakfast Program, and 25% offer after-school snacks and/or supper through the Child and Adult Care Feeding Program (Fox and Gearan 2019).

But while schools may be serving meals with a better nutrient profile, it does not mean that all students are eating healthfully at school. About half of all US students participate in the NSLP on the average day, and only 35% of the students who do not receive free or reduced-price meals participate (Fox and Gearan 2019). Some students bring their own lunches (of unknown nutritional value), leave campus for other eateries, or forego lunch altogether. Even families who could use the financial subsidy offered by the meal program may not take advantage of it, discouraged by the administrative hurdles of applying or the stigma of accepting public benefits (Poppendieck 2010; Askelson, Golembiewski, Ghattas, et al. 2017).

Even when students do participate, they may not select and eat the foods that adults think are the healthiest. The HHFKA regulations raised concerns from school meal service staff that students would reject offerings and may even stop participating in the program (Asada, Ziemann, et al. 2017; Cornish, Askelson, and Golembiewski 2016). Studies since the implementation of the new regulations have not found a correlation between healthier meals and lower participation or consumption (Mansfield and Savaiano 2017; Fox and Gearan 2019). However, researchers have found that students remain less likely to select and eat fruits and vegetables than other components of the meal. A review of studies conducted through June 2015 showed that fruits and vegetables are the foods that students throw away in the greatest quantities (Byker Shanks, Banna, and Serrano 2017). In a nationally representative sample of schools in SY 2014-15, students discarded on average of 31% of their vegetables and 29% of fruits, compared to 16% of entrees and 20% of desserts and other items (Fox and Gearan 2019).

Other studies have demonstrated that the most popular student entrees are often those least likely to be considered healthy (Moreno-Black, Homchampa, and Stockard 2019; P. Johnson et al. 2015).<sup>4</sup> For example, P. Johnson and colleagues found that elementary school students most often selected pizza, hamburgers, corn dogs, and chicken nuggets, while fewer students chose entrees like soups, salads, or deli sandwiches (2015). Even those who selected these less popular items did not eat much of them.

Students confronting food insecurity may miss an opportunity for nutrients they need if they don't eat, or don't eat much, at school. Further, if students avoid the fruits and vegetables meant to offer a significant part of the meal's nutrients, the NSLP is not promoting student health in the way that many school food advocates, practitioners, and parents would like. The HHKFA lays out goals of "end[ing] childhood hunger" and "reducing childhood obesity and improving the diets of children" (S. 3307). But if students don't participate in the meal program, neither goal may be achieved. And if they do not select and eat healthy foods, the second will not.

In SY 2018-19 the federal government spent \$18.2 billion per year on school feeding ("Federal Cost of School Food Programs" 2019). That year the program served almost 30 million students on an average day and could impact millions more who do not regularly participate. This level of investment, combined with its potential scope, offers a

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<sup>4</sup> Some may consider that the HHKFA nutrition regulations ensure that all foods served in schools are "healthy"; however, individuals may have different standards for what health looks like in school meals. (Chapter Six will discuss such differences in defining healthy foods among staff and students.) While the nutrition guidelines are intended to ensure that school meals overall offer high nutritional value, individual items offered may be considered less healthy. Cafeterias continue to serve items that many would deem "junk food," such as chicken nuggets and pizza, which are usually highly processed and lower in nutrient density.



rationale to investigate why the NSLP is not achieving its full mandate of feeding students and promoting their health.

### *Structures of NSLP Implementation*

Why don't more students participate in the NSLP, and why don't more eat the healthy items offered? Analysis of the NSLP often focuses on the federal program regulations and their impact on what is offered and consumed at school, or on particular school-level interventions designed to change students' knowledge or behaviors. But few studies (Poppendieck (2010) is a notable exception) have tried to *explain* how the realities of the program connect to its outcomes, and fewer actually investigate what happens in the school kitchen and cafeteria that may affect whether and what students eat at school.

Federal funding and guidelines structure much of what is possible in the local SFA and its cafeterias. SFAs across the nation operate on very tight budgets – for the average SFA, revenues cover only 97% of its costs (Fox and Gearan 2019). SFAs must also adhere to and document compliance with regulations related to nutritional content of meals, food safety protocols, staff training, student eligibility for meal benefits, and procurement processes. Yet within these constraints, meal program directors, their support staff, cafeteria managers, and food service workers all make decisions that affect how the NSLP is delivered. The SFA director or meal planner sets a district-wide menu, while the cafeteria manager at an individual school will often decide which types of fruits and vegetables to serve. Each SFA decides how to equip its kitchens and train its staff, and those staff then have the final say in how foods are executed and presented to

students. As a result, the meal offered in one school will not be the same as the meal served in the school in the next neighborhood over, let alone in a different district or state. The meal may not even be the same in a school's first and last lunch period of the day.

Students' decisions also affect how the program plays out. They are the final arbiters of whether the program actually reaches its intended target – that is, whether the meal is eaten by the student or directed to the trash can. Students also contribute to the environment of the cafeteria and discourse about school meals, whether by saying they like the apples or by exclaiming that something in the lunch line looks gross. SFA staff in turn are influenced by what they see and hear from students as well as by their own ideas of students' desires and behaviors.

Because of these many actors and their particular context, even though the formal policy text and program regulations set the structure of the program, the NSLP is varied in practice. Understanding whether students participate and what they eat thus requires looking more closely at the meal experience that is generated by the activities of SFA staff and how students react. Students, when offered the meal, choose which items to take, how much of them to eat, or whether to find a different lunch entirely. Decisions that staff have made about how the program is implemented influence whether or not students eat healthfully at school and, as a result, whether the NSLP ultimately achieves its goals of preventing student hunger and promoting student health.

But only a few researchers have looked at the day-to-day implementation of the NSLP – that is, what goes on in school kitchens and cafeteria – to explain the program's

outcomes. Similarly, there is only a small set of studies that ask staff and students about their beliefs and activities. This dissertation expands on previous school food research by investigating NSLP implementation from the perspective of students and staff. In the next section I introduce public policy literature on implementation to show why it is worth studying how the NSLP is implemented – especially by asking those directly involved in implementation – if we want to understand how it could better achieve its stated outcomes.

#### *Understanding NSLP Implementation*

Public policy literature suggests that achieving policy goals does not end with passing legislation or writing regulations. Implementation research focuses on the ways in which the policy text as written is translated into the actual practices of the program that is delivered (Hill and Hupe 2014). Many early implementation studies tried to figure out where on-the-ground actors “went wrong” in delivering the written policy, assuming that better fidelity to the policy text would create the desired policy outcomes. Michael Lipsky (1980), in *Street-Level Bureaucrats*, instead suggested that those implementing the program were the true policymakers – that their decisions effectively *became* the policy, despite the intentions of legislators or higher-up bureaucrats. The beliefs and actions of frontline workers, then, lead directly to policy outcomes since they determine the program that is delivered.

Another line of implementation studies suggests that the recipients of a program also can affect its outcomes. The concept of co-production is often applied to systems in which there is a role for actors other than the main provider (here, the government) in

creating a service. While definitions of co-production vary, in the case of the NSLP, it is clear and inevitable that actors beyond state agents are involved, since certain behaviors by students are required for the program to be delivered as intended. A frequent example of co-production is education: while the government may build schools and hire teachers, education will not happen unless students attend classes and do their homework (Alford 2016; Brandsen and Honingh 2018). Just as a student must pay attention in order for the desired outcomes of education policy to occur, so must they eat the full school meal in order for the health goals of the NSLP to be achieved.

Thus, understanding school lunch as a site of co-production encourages taking seriously the perspective of students, who have the final say in whether a nutritious meal ends up in the trash can. Food service staff offer a proposition, i.e. the meal, to students (Osborne 2018). Students will choose to eat at school and to eat certain foods if they find value in doing so (Alford 2016; van Eijk and Gasco 2018). Only if students see benefit to themselves, such as enjoying the meal or not being hungry, will the public value of the program, namely healthy future citizens, be created. As such, to influence the success of school meals policy and ensure the co-creation of value by students and staff, we must better understand both sides of this value transaction – the meal experience that SFA staff create as well as how students see and react to this offering.

However, there has been only a minimal amount research on the NSLP that looks at staff and student beliefs and activities. Most studies involving meal program staff use SFA directors as informants and do not look at the processes of school food programs within cafeterias (Thomson et al. 2012). And while many studies of the NSLP analyze how

much of which items students eat, fewer offer explanations as to why or explore student perspectives on their own eating behaviors. Especially when it comes to healthy foods, studies of the NSLP frequently focus on demographic characteristics of students or interventions related to nutrition education and the cafeteria environment (Graziose and Ang 2018; Contento 2008; Quinn et al. 2018; Frerichs et al. 2015; Cohen et al. 2015). The few studies that collect qualitative data from students indicate that students themselves say the biggest barrier to eating any foods at school, healthy or otherwise, is their taste (Payán et al. 2017; Chatterjee et al. 2016; Asada, Hughes, et al. 2017). Taste, then, is an example of a value highly weighted by some actors (the students) while potentially dismissed or under-weighted by the main providers; an analysis that focuses on implementation and the disparate actors involved in the co-production of school lunches allows a more effective analysis of the factors that contribute to the program's success.

The emphasis that students put on taste aligns with other studies investigating children's eating behaviors, and this research can offer further insight to help understand students' participation and consumption in the NSLP. There is robust marketing research on individuals' evaluation and consumption of particular foods as well as more holistic anthropological and sociological investigations which explore human behaviors related to eating. Overall, these literatures suggest that people's decisions about what to eat are complex, or as the title of one paper puts it, "Food Choice is Multifaceted, Contextual, Dynamic, Multilevel, Integrated, and Diverse" (Sobal et al. 2014). Eating behaviors are affected by factors related to the food itself (e.g., sensory attributes and nutritional value), the individual (e.g., food values and personal preferences), the environment (e.g.,

food options, lighting, and behavioral norms), and the broader social context (e.g., community socio-economic status, and food availability) (Stok et al. 2017; Symmank et al. 2016; Furst et al. 1996; Fernqvist and Ekelund 2014).

This dissertation begins to develop a holistic picture of how these diverse elements present themselves in the cafeteria and influence students' eating behavior. Using the perspective of both students and SFA staff, it offers findings as to how SFA staff, at the district and school level, see the value proposition that they make to students. That is, what do they as service providers offer in order to encourage student participation in the meal program as well as selection and consumption of healthy foods? And how do students see and respond to this value proposition, and what influences whether they decide to eat and to eat healthy foods at school?

## **Project and Methods**

My dissertation project begins from the premise that students and SFA staff play a crucial role in determining the NSLP that is delivered and whether it achieves its outcomes related to student health. As such, I wanted to understand from both staff and students what they think makes a valuable meal experience and what that means for how they interact with the meal program. My research questions ask 1) how SFA staff and students conceive of food quality and lunch experience in the NSLP and 2) how SFA staff and students operationalize their understanding of food quality and lunch experience through their activities (see Table 1.1 for more details). Because of the distinctions in roles between staff employed in the central SFA office and in schools, I considered three groups of stakeholders: 1) district-level staff, i.e., those employed in the

central SFA office; 2) school staff, i.e. school-based cafeteria managers and workers; and 3) students.

Table 1.1. Research questions

1. How do SFA staff and students conceive of food quality and lunch experiences in the National School Lunch Program (NSLP)?
1a) How do actors describe quality food and lunch experiences? What characteristics make for good or bad foods and lunch experiences?
1b) How do these understandings compare to federal, state and/or other stakeholders' suggestions of what quality food and lunch experiences look like in the NSLP?
1c) How do actors think the other groups think about/prioritize characteristics of quality food and lunch experience?
1d) Where is there alignment or lack of alignment between or within groups of actors?
2. How do SFA staff and students operationalize their understandings of quality food and lunch experiences through their program activities?
2a) How do students' conceptions of quality food and lunch experiences influence their participation, selection, and consumption decisions?
2b) What opportunities do actors see to enhancing student participation as well as selection and consumption of certain foods, especially healthy ones?
2c) What challenges do actors see to enhancing student participation as well as selection and consumption of certain foods, especially healthy ones?
2d) What barriers constrain staff ability to enhance food quality? What barriers constrain students' participation, selection, and consumption?
2e) Where is there alignment or lack of alignment between or within groups of actors?

I designed the first set of research questions to investigate which factors influence actors' judgments of school food in order to illuminate what students want or expect from the NSLP and what staff think is important to provide. These questions highlight the differences among those directly involved in the meal program (i.e. the staff and students), both in terms of what they express about their own desires and what they think that other actors want.

I designed the second set of research questions to build on this understanding of what actors value in the meal program by connecting it to their activities. For students,

how do their expectations for the meal experience end up affecting whether they choose to participate in the program and what they eat? For staff members, how do their ideas about what students want affect what they try to offer them, especially as they seek to encourage healthy eating?<sup>5</sup> In particular, where might staff be providing or trying to provide something that does not align with what would drive students to participate and/or eat healthy foods? Since we know the meal program has not always been fully successful in achieving these goals, these questions also sought to explore the constraints that may prevent staff from providing the meal experience that they might like to.

I investigated these questions using data I collected as the Primary Investigator on the *PreK-12 School Food: Making It Healthier, Making It Regional* (MHMR) project.<sup>6</sup> Running from November 2015 through May 2018, it examined meal program operations in six school districts (located in Florida, Georgia, Iowa, Kentucky, South Carolina, and Virginia), all of which were actively attempting to purchase and serve foods they considered to be healthier and regionally sourced. All six districts were relatively large in terms of student enrollment and located in urban or suburban settings.

Responding to the lack of detailed, qualitative data on NSLP implementation, the research project used an exploratory, qualitative approach to gathering information about SFA practices. We used single and group interviews as our main data collection

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<sup>5</sup> Given the variation in the ways that individuals and institutions can define healthy eating, I did not begin this analysis with a set definition of healthy eating or healthy foods but rather followed informants' understandings of those terms. How they described which foods are healthy is further detailed in Chapter Six.

<sup>6</sup> This research study was funded by the Robert Wood Johnson Foundation and conducted by School Food Focus and FoodCorps. School Food Focus was a national nonprofit that worked with school districts to encourage their procurement of healthful, regional, and sustainable foods. As of January 2018 it merged with FoodCorps, a national service organization which connects children to healthy food in school.



tools. Over the course of two two-day site visits to each district in SY 2015-16 and SY 2016-17, the research team conducted 32 interviews with district-level staff, 24 with cafeteria managers, and 19 group interviews with three to eight students each.

Interviews with staff covered details on school meal operations (e.g., budgets, training, menu planning, and food preparation), the interviewee's experience providing healthy foods in school meals, and their perceptions of other stakeholders' attitudes to healthy foods. Student interviews focused on their perspectives on the quality and experience of school lunch as well as their understanding of and opinions on healthy foods in particular; we used both discussions and prompted drawing exercises to elicit the students' perspectives.

I used an inductive approach to analyze the data, influenced by grounded theory and the constant comparative method (Glaser 1965; Burck 2005). I analyzed interviews using a "generic" coding approach, accompanied by writing analytical memos and comparing coded data using matrix data displays (Lichtman 2013; Saldaña 2013; Miles and Huberman 1994). I also conducted content analysis on the drawings that students had done during the group interviews, counting the types of food items drawn in response to questions about what students usually eat for lunch and what they consider to be healthy. In presenting the findings, I try to include the voices of the study participants as much as possible. I use brief composite narratives to convey more holistically the experience of participating in the school lunch program (Willis 2019; Wertz et al. 2011).

## Findings

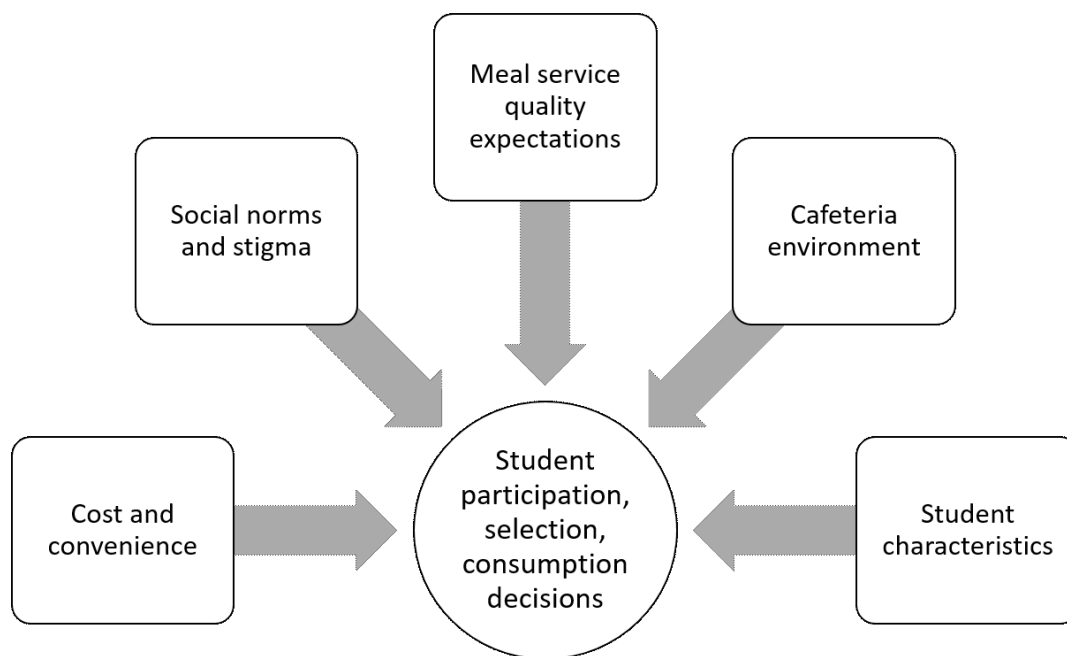
Through this data analysis, I categorized various factors that students and SFA staff described as contributing to a high-quality lunch experience (research question #1). I found that staff members use their understanding of what they think students value, or what they think will influence students' behaviors, to guide their activities as they prepare, serve, and promote school meals (research question #2). Students' conceptions of quality meals (research question #1), along with other personal and contextual elements of the school lunch situation, condition how they judge and react to the meals that staff provide (research question #2). As students choose whether and what to consume, the goals of the NSLP are either realized (if students eat healthy foods) or not (if they don't participate or don't eat the meal).

In this section, I introduce, in two parts, a model that I have created to depict student and staff descriptions of the factors influencing students' participation, selection, and consumption behaviors. These models reflect how students describe their own attitudes and behaviors, how SFA staff describe their perceptions of what influences students, and my analysis based on hearing and synthesizing these perspectives. First, I outline the factors that affect whether students participate, what items they choose, and which they eat. Then, I dive deeper into one of these categories, meal service quality expectations, to explain the elements that determine what students experience and expect at lunch. I conclude this section with a comparison of the differences between the staff and student perspectives and resulting suggestions to support the NSLP to better achieve its goals of student participation and consumption.

*Influences on Student Participation, Selection and Consumption*

Together, students and staff described five categories of factors that influence students' decisions to participate in the NSLP, what to select, and whether to eat it: 1) cost and convenience; 2) social norms and stigma; 3) cafeteria environment; 4) student characteristics; and 5) expectations for the quality of the meal experience (see Figure 1.1). Cost refers to connections between a family's income and its children's participation in the NSLP, while convenience reflects students' desire for ease in procuring their lunch. Social norms comprises students' desires to socialize during lunch as well as associations of school lunch with being "uncool" or for the poor. The built and social environment of the cafeteria reflects descriptions of the cafeteria environment as physically unpleasant as well as the short time period available for lunch and long cafeteria lines. Student characteristics include fluctuating personal states like hunger as well as food allergies, health conditions, or religious dietary restrictions that limit what students can eat.

Figure 1.1 Influences on student participation, selection, and consumption decisions



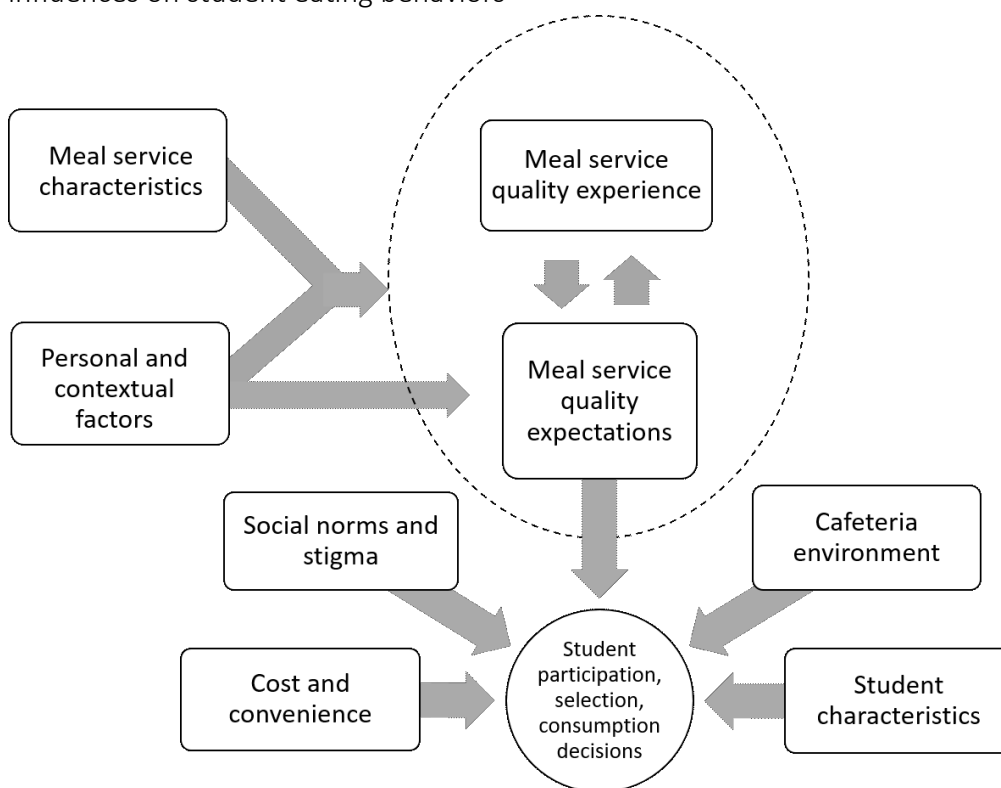
The final category, students' expectations for the quality of the meal experience, represents how students most frequently explained their decisions to participate in the meal program or not as well as about which items to take and whether to eat them. I use the term "meal experience" to refer to both the food itself and the context of how it is served, e.g., the choices available and the customer service. This dissertation focuses most closely on these expectations and how they are formed, given the key role they play in student behaviors and how SFA staff try to influence them.

#### *Meal Service Quality Expectations and Experience*

Figure 1.2 shows the connection between meal service quality *expectations* and meal service quality *experience*. It also includes the two sets of elements that staff and students described as influencing students' meal service experience and expectations: 1) the characteristics of the meal service, and 2) personal and contextual factors. The first category, meal service characteristics, includes the actual qualities of the lunch

experience that SFA staff offer and students receive (or reject). The second category contains the personal and contextual factors that influence student experiences and expectations by structuring how individuals interpret and respond to the various characteristics of a particular meal, item, or school food in general.

Figure 1.2. Determinants of meal service quality expectations and connection to influences on student eating behaviors



As shown in Figure 1.2, the meal service characteristics and the personal and contextual factors combine to affect students' experience and expectations of the meal program. The meal service characteristics are interpreted based on students' personal traits and within the particular school meal context. For example, the experience of eating a chicken patty will be determined by the actual taste of the chicken patty (a characteristic) as well as whether it meets the student's standards for what a chicken patty should taste like (a personal factor). Similarly, the student's expectations for

whether they will like the chicken patty might be influenced by where they think the chicken patty came from or how they think it was prepared. Personal and contextual factors may affect the student's expectations regardless of the actual characteristics of the meal service: they may have heard that the chicken patty has whole-grain breading and thus don't think they will enjoy it, or they may have seen a sign advertising a new chicken patty and be excited to try it.

Figure 1.2 also shows the entanglement between expectations and experience. Expectations can influence how the meal or a particular food is experienced, both long-term and in the moment. For individual items, thinking a food looks unappealing may affect one's experience of the taste. More generally, several staff and some students suggested that no matter what the meal program provides, students will be likely to have a negative experience if that is what they expect. These expectations may have, in turn, come from past negative experiences. The experience of the meal service or of a particular item over time can influence future expectations for what it will be like: eating several mushy apples may make a student expect that all school apples will be mushy.

Figure 1.3 goes into more detail about the specific characteristics identified by staff and students as important to students' expectations and experience of the meal service. Students described sensory attributes, such as taste, texture, and temperature, as most salient. They also expressed a desire for greater variety and more options in the foods offered at lunch, and, in some cases, a greater amount. SFA staff recognized these sensory attributes as important and also stressed the type of food as important to students (for example, hot dogs over hummus or apples over pears). Staff also focused

on how items are prepared or processed and where they come from as well as how the cafeteria staff present them to students.

Figure 1.3. Determinants of meal service quality expectations and experience

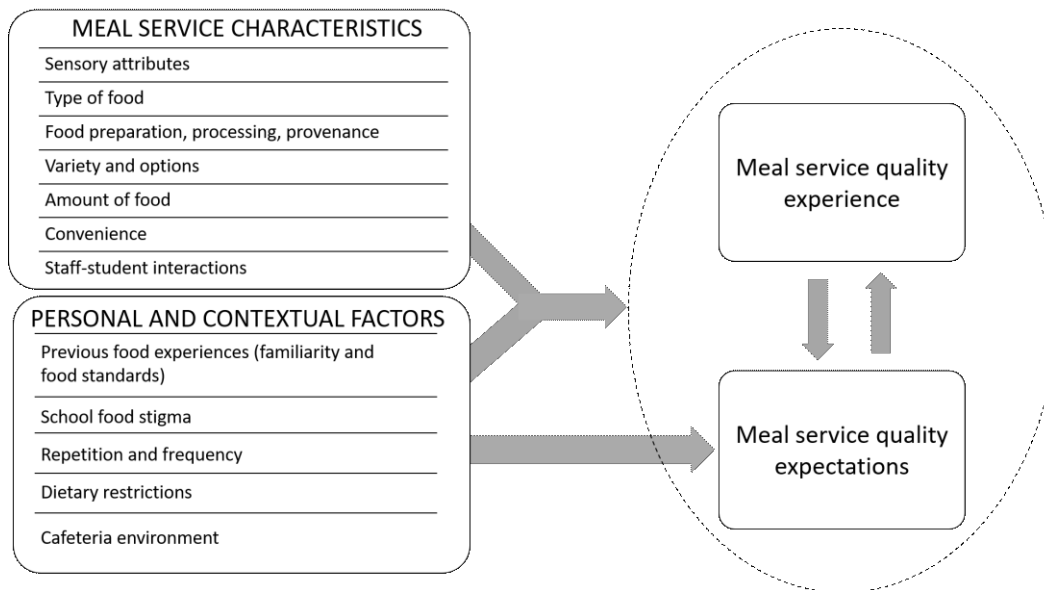


Figure 1.3 also lists the personal and contextual factors that staff and students suggested contribute to students' experiences with and expectations of the meal service. Staff frequently referred to students' previous experiences with food and their ensuing familiarity and preferences to explain whether students ate the food served at school or not. Students themselves referred to their internal standards for how foods should taste or be prepared as well as other personal factors like dietary restrictions. Staff and students acknowledged that stigma related to certain foods or school food in general would color students' expectations. Staff thought that students might especially have negative expectations of foods labeled as "healthy." Students themselves did not reflect stigma toward healthy foods; however, some did portray an unwillingness to try foods that they did not recognize and thus could not trust that they would like.

The fact that students eat at school regularly, some every day for most of the year, for 13 years, also contributes to the student experience. As a balance to the reluctance to try novel or non-recognized foods, the students are also sensitive to repetition. This repetition especially conditions their expectations for variety and options, making students dissatisfied with receiving what they see as the same foods again and again. Eating with such frequency in any one place also makes negative experiences inevitable, which in turn may exacerbate negative expectations. Staff mentioned that these negative experiences could be due not just to the food itself but also to the physical environment of the cafeteria and the presentation of the food.

#### *Comparing Staff and Student Perspectives*

Every day SFA staff members make decisions about how to allocate their time, energy, and other resources when creating the meal experience, and they use their beliefs about what students want and what could shift student behaviors to guide what they do. Comparing staff and student perspectives on the meal program using the frameworks described above shows how SFA staff may deliver a meal service that students do not experience or expect to be valuable. As a result, students may not choose to eat at school, or they may not choose to eat certain items, thus preventing the NSLP from creating the public value of hunger prevention and health promotion that it is designed to achieve.

Comparison between staff members' and students' perceptions shows two different scenarios that result in staff offering a meal service experience that students do not find appealing. In some cases, students and staff see different characteristics of the



meal service as important, or different personal and contextual factors as most meaningful in affecting expectations and experiences. For example, students stress their concern about the sensory attributes of the food that they eat, while staff may focus on the type of food and the student's familiarity with it. Second, even if staff and students agree on important characteristics, students may not experience them as the staff intend. Staff and students both emphasize freshness as a key attribute in a quality meal experience, but students do not generally find the food they are served to be fresh, despite staff members' efforts. While many SFA staff see themselves as working hard to offer students a meal service featuring fresh, healthy, and kid-friendly foods, students may experience a meal that doesn't taste very good, is of questionable origin, and that it seems not much effort has been put into making or serving.

The models above are not an exhaustive accounting of all of the factors that affect students' eating behaviors at school, and there is much more to understand about how these elements individually and collectively affect student participation and consumption. Still, the comparison of staff and student perspectives suggests changes that could positively affect meal service outcomes within the current context of the NSLP: 1) improving food quality; 2) soliciting student feedback; and 3) removing time constraints on preparing, serving, and eating lunch. Ensuring school foods are fresh, tasty, and attractive, and that students perceive and trust this to be the case, would make students more likely to eat, and to eat healthy foods, at school. To do so requires students' input on what is important to them and their feedback on the quality of their

meal experience. This type of engagement, as well as improving food quality, necessitates more time for lunch and related activities as well as more staff labor.

These suggestions are not necessarily easy to execute, given the entrenched structures of the NSLP. They require resources and collaboration which may be difficult to come by in the current school context. But the SFAs in this study constantly adjust their programs in order to improve them and have already begun to make such changes despite these constraints. While making incremental changes to individual district meal programs might seem both challenging and insignificant, such improvements are a crucial part of creating a meal program where all students eat healthy foods at school.

### **Contribution**

This study offers a holistic way of looking at the factors influencing student participation, selection, and consumption behaviors related to school meals, which few other studies have tried to do. The program's providers, the SFA staff, use their beliefs about what students want to guide them as they create the meal experience they think will encourage their clients to co-create the value of the NSLP. However, what staff provide or how they encourage students to participate and eat may not fully align with what students see as valuable in the program or what will actually influence their behaviors. Without direct communication between staff and students, staff may misunderstand what students want and how to provide it, and students may not realize the potential of what the SFA offers.

Further, these findings suggest that those interested in facilitating the NSLP's goals of health promotion and hunger prevention should consider a range of factors not

always highlighted in research or discourse about school meals, but which can help explain why students do or do not eat at school. Federal NSLP legislation and regulations do not focus on ensuring the palatability or variety of school foods, providing enough time to eat lunch, or combatting the cultural stigma around school food. Yet understanding and attending to such factors affecting NSLP implementation is crucial to ensuring the success of the meal program.

This dissertation offers findings relevant to school food service practitioners and the advocates and researchers who try to support their work as well as those making policy for school meals or other public service programs, especially those related to food. It also makes a contribution to theoretical and empirical literature on co-production, adding a case study and highlighting the importance of looking at the value offering from the perspective of both providers and clients in order to understand how co-creation of value works in a particular program context.

#### *School Meal Practitioners, Advocates, and Researchers*

This dissertation outlines major characteristics of the meal service that are important in determining students' experiences of and expectations for school lunch as well as the personal and contextual factors that influence how students interpret those characteristics. It also demonstrates the ways in which staff and student perspectives on these student perceptions both align and differ, and what that means for students' participation, selection, and consumption behaviors. Knowing where student and staff perspectives of the meal service are aligned or not can give providers a better sense of what they can do to improve student expectations and experience. It matters that meal

providers have a clear understanding of the determinants of student eating behaviors so that they can tweak the elements that will encourage students to participate and eat healthy foods at school, thus achieving the health outcomes of the program.

Practitioners may want to consider more sustained attention to the daily execution of foods in the meal program as well as students' experiences over time. Similarly, advocates who support school meal programs should look for ways to help enhance students' day-to-day experience of the meal program itself. This could take various forms, such as directing funds to support cafeteria staff training or engaging students more closely with what actually happens in the cafeteria. Those lobbying for policy change and policymakers themselves could help make the above suggestions for changes to SFA practice more achievable. Increased funding would help SFAs improve in a number of ways, from purchasing higher-quality food to increasing cafeteria workers' compensation and hours.

This dissertation adds to the current literature on school food by attempting to understand student eating behaviors from the student's perspective. Very few studies, even those that collect student opinions, offer explanations of the student experience, despite students' crucial role in determining the program's outcomes. And as the findings highlight, what adults, whether informants or researchers, think about the program may not align with what students think, so it is crucial to directly engage students in generating a full understanding of how school food programs actually work.

### *Co-production*

The success or failure of school meals policy, in terms of outcomes for health and hunger, hinges on whether and what students eat at school. I suggest that this moment of co-production, when the recipient decides whether or not to take advantage of the service, is a crucial part of the policy process. This is when the policy is finalized based on what SFA staff provide: for example, whether the meal program offers a dry chicken nugget and a mushy apple, or a freshly-roasted drumstick and a ripe pear. This moment is also when the public value of the program is actually created, based on whether the student actually consumes the meal or throws it away, as if none of the policy legislation or subsequent actions had taken place.

By looking at co-production in a particular time and place (i.e. large, urban school cafeterias), we gain a better picture of its multi-faceted reality. Policy legislation and regulations at the federal, state, and local level structure how co-production takes place. But the SFA staff on the ground are the final decision-makers. Examining the case of school meals, we see that the full execution of the service depends on program clients and the myriad factors that influence their behavior in relation to the program offering. In turn, policy providers adjust the service they provide based on what they see as these elements that impact client perceptions and behavior. The formal policy text of the NSLP does not offer guidelines for how to create a value proposition that encourages co-creation, so implementers use their own beliefs to guide their practices as they create the proposition to offer to their clients. But if this offering does not align with what clients are looking for, the value of the service may not be realized.

Thus, it is important to understand how the program users and providers perceive the program they interact with. What do frontline staff try to provide, and how do clients react to it? Detailed, qualitative data, directly from program participants, is necessary for a clear understanding of why and how value is co-created (or not) in a particular case. Without knowing what clients and frontline workers think about the program, we will miss major elements that explain why co-production functions as it does in a particular context. Further, this information indicates potential opportunities for intervention to enhance co-production. A lack of alignment between providers and users on what the value offering is or should be can suggest adjustments to what providers offer or how they try to influence clients' behavior.

The influences on client and provider engagement with the program can vary widely – from the material goods that the program provides to interactions between clients and providers to the values that each individual holds. These elements affect each other, so understanding how they work together is crucial to understanding how co-production happens. Although we may not think of such a diverse array of factors – from the individual to broad social structures, both the tangible and the intangible – as relevant to the delivery of social services, these affect how policies are actually implemented and thus whether they are able to achieve their desired outcomes. Improving the results of the NSLP requires attention to these elements of implementation in their particular school or SFA context, in addition to making changes to overarching federal policies and program structures.

In sum, looking at what happens on the ground and why is crucial to understanding the outcomes of the NSLP. The value of the program is co-created between its user and provider, as providers make an offering and recipients respond. Policy legislation and regulations, as well as other political, economic, and social factors, structure this offering – but the outcomes of the NSLP ultimately depend on the activities of the SFA staff and students who engage directly with the program. Staff ideas about students shape what they provide, and students' thoughts and values determine how they respond. If SFA staff members' beliefs and activities do not align with students', students will not co-produce in the way that program providers would like (by eating healthy foods) and the larger value of the program will not be realized. Thus, achieving the goals of the NSLP requires understanding both the staff and student sides of the co-production process – how they see and engage with the program and why – so that ultimately they will work together to create value for themselves and the public.

### **Structure of the dissertation**

The next chapter of this dissertation reviews relevant literature on implementation, focusing on co-production as well as on eating behavior in school and more generally. Chapter Three lays out the methods used in the MHMR project and for this dissertation's analysis. Chapter Four shows how students' beliefs and experiences matter to the program outcomes by looking at what they see as the influences on their eating behavior. Chapter Five does the same from the provider side of the co-production process, showing how SFA staff beliefs, specifically about what students want, influence their activities and ultimately the meal experience that is offered. In Chapters Six and

Seven I compare SFA staff and student perspectives, specifically related to healthy foods (Chapter Six) and other elements of the program (Chapter Seven). These two chapters demonstrate where there is alignment between staff and student beliefs and activities related to the meal program, or a lack thereof. It also shows how this lack of alignment offers opportunities to better facilitate student co-production and thus creation of the desired program outcomes and value. The dissertation concludes with a summary of the findings and their implications for NSLP practice and research as well as for studying co-creation of value in public programs.



## Chapter 2: Understanding the National School Lunch Program

### Introduction

Applying public policy research to the National School Lunch Program (NSLP) clarifies the need to investigate the actors who implement the NSLP, including the workers who make and serve the food and the students who consume it (or don't). Studies of various kinds of "street-level bureaucrats" have underscored the importance of frontline workers in creating policy, especially in social programs (Lipsky 1980; Maynard-Moody and Musheno 2003; Brodtkin 2015). Literature on co-production also shows that program recipients matter in determining how well a policy works. Together, these bodies of research indicate that how providers and recipients view and engage with programs determines the results.

However, not many school food studies have looked at the activities of cafeteria and district-level school food authority (SFA) staff or the perspectives of workers and students on the program. A considerable amount of research has documented what students eat at school and has attempted to link student consumption to program policy changes (especially at the federal level), other types of interventions, or student characteristics. Only a few studies have addressed the beliefs and practices of those participating in the school meals program on a daily basis or used those actors as informants to better understand the program's operations and outcomes.

While research on the NSLP offers some explanation of students' responses to school meals, broader literature on eating behaviors suggests there are many factors that influence how individuals react to particular foods and make decisions about what to eat.

Food quality and marketing research as well as more anthropological and sociological studies of food offer frameworks to help understand behaviors related to school lunch.

In this chapter I first review literature related to street-level bureaucracy and co-production to indicate the potential value of studying on-the-ground meal program staff and recipients. I then highlight what we can learn and what is missing from current research related to what is provided in the NSLP and how students respond. Finally, I highlight research from various fields on food and eating that offers other ways to understand students' behaviors related to the meal program.

### **Understanding public programs**

The NSLP is one of the country's main social programs to prevent hunger; however, little literature has analyzed its implementation in terms of public policy or administration theories (exceptions are Pautz, Jones, and Hoflund (2018) and Tabak and Moreland-Russell (2015)). The policy subfield of implementation offers guidance to understand factors influencing the delivery of public programs. In particular, two areas of study related to program implementation could be useful for understanding the NSLP: street-level bureaucracy and co-production. These bodies of work shed light on the ways in which frontline workers (i.e., SFA staff) and clients or targets of social policy (i.e., students) contribute to policy outcomes. Together, these two literatures provide a rationale for examining closely the beliefs and practices of workers and clients in order to fully comprehend policy execution and outcomes.

### *Street-level Bureaucracy*

The field of implementation studies dates to the 1970s, when, as Hill and Hupe describe, “it became recognized that it might be problematical ... to treat the administrative process between ‘policy formation’ and ‘policy outcomes’ as a black box irrelevant to the latter” (2014, 44). Most authors cite Pressman and Wildavsky’s *Implementation* (1973) as the founding text of the subfield. Pressman and Wildavsky studied an economic development initiative in Oakland, California which failed despite the largely positive intentions of those involved in executing it. Among many reasons, they found that the complexity of joint action, the many participants and perspectives, and the gap between those making decisions and those experiencing the consequences resulted in an inability to achieve desired program outcomes. Other studies followed, asking similar questions about why implementers failed to execute policies in ways that led to the intended outcomes.

Michael Lipsky (1980), in another foundational implementation text, focused on the activities of these program implementers, coining the term “street-level bureaucrat” to refer to the frontline worker delivering public services, such as the policeman, teacher, or caseworker interacting with the client. Going beyond Pressman and Wildavsky, he argued that the sum of street-level bureaucrats’ decisions, routines, and coping mechanisms actually *is* the creation of public policy. Street level bureaucrats’ actions determine the experience of the policy for individuals, in terms of both what they get and how the interaction feels (Lipsky 1980; Hupe, Hill, and Buffat 2015; Durose 2010). Lipsky also detailed the challenges frontline workers face and the influences on their behavior: a lack of resources, a heavy workload, vague goals, and the inherent tension between

responding to individual needs and treating everyone fairly. In the case of the NSLP, cafeteria staff are the frontline workers, that is, those who interact directly with clients. SFA staff at the district-level take on some characteristics of street-level bureaucrats as well, as argued by Pautz, Jones, and Hoflund (2018). District-level SFA staff members also interact with and feel responsive to the program's clients, and they have discretion over elements of the program that immediately affect clients, such as the items on the menu, customer service practices, and decisions about how to distribute scarce resources. Like other types of street-level bureaucrats, SFA staff are constrained in their activities but develop coping mechanisms to achieve what they see as their duties (Pautz, Jones, and Hoflund 2018).

*Street-Level Bureaucracy* inspired future policy scholars to continue to “open up the black box of what literally happens in implementation organisations” (Hupe, Hill, and Buffat 2015, 9). These studies describe the role of the frontline worker in various contexts and from different perspectives (see, for example, Hill and Hupe (2015) or Maynard-Moody and Musheno (2003), many focusing on factors that condition frontline workers' behavior and contribute to outcomes different from those anticipated by the official policy text.

Several studies examine the street-level bureaucrat's lack of resources in comparison to the number and complexity of their tasks, which leads not only to coping mechanisms that shape policy delivery but also can explain the failure of initiatives that attempt to reshape policy without accounting for the reality faced on the ground by those delivering it (Brodkin 2015). Meyers and colleagues (1998), observing frontline

welfare workers and their clients to determine the impact of the 1996 welfare reform efforts, found that given the circumstances under which the reforms were implemented, “including limited resources, complex administrative problems, conflicting policy objectives, and ambiguous political support — modest changes in welfare policy were unlikely to transform the operations or the dominant message delivered by workers at the front lines of the system” (Meyers, Glaser, and Donald 1998, 20). In other words, elements of the institutional context of the program and the ensuing activities of the workers structured the delivery of the program more than changes to the federal regulations.

This literature also emphasizes the power of shared beliefs between frontline workers in influencing their behavior. Riccucci (2004), also investigating the mid-1990s welfare reforms, found that management was not as powerful as pre-existing norms, beliefs, and shared understandings in influencing frontline workers’ beliefs about the program they delivered. Musheno and Maynard-Moody, in a classic exploration of frontline workers, highlight that the strategies workers use “are derived more from stories that circulate among themselves than policy, rules and management directives” (2015, 170).

Maynard-Moody and Musheno also describe the role of street-level bureaucrats in negotiating between “prescribed practice and everyday living people and problems” (2012, S19) and the ways they “improvise [to] do what they can” (S20) within the constraints of the rules they must follow. Lavee and colleagues highlight the “gap between formal policies and people’s real needs” (2018, 334) that street-level

bureaucrats must confront. They suggest that when caught in this conflict implementers will do what they find best for their clients' well-being and that this unique perspective on both policy text and client needs suggests they should explicitly be involved in policy design "to bridge the gap between top-down calculations and the needs of the public" (335).

In sum, street-level bureaucracy literature shows the ways in which execution of legislation and regulations are influenced by those on the frontlines of a program – the conditions they work in, what they believe about their role and situation, and what they do as a result. This body of work provides a rationale to examine the context in which policy legislation and regulations are implemented, particularly the beliefs and understandings of the workers in the program, as these can influence program operations and, ultimately, outcomes.

### *Co-production*

Studies of street-level bureaucrats often posit service delivery as a one-way transaction in which the implementers offer something to clients (Hand 2014). But other scholars interested in implementation have suggested the programs recipients are also involved in the delivery of public policy. The idea of "co-production" offers a useful complement to street-level bureaucracy by theorizing this role of the client of public programs.

In general, co-production is the idea that individuals and groups beyond the state contribute to the delivery of public services (Nabatchi, Sancino, and Sicilia 2017; Brandsen and Honingh 2018). The term originated in the late 1970s and early 1980s

among scholars of public policy and administration, particularly Elinor Ostrom and colleagues (Ostrom et al. 1978; Parks et al. 1981; Sharp 1980; Whitaker 1980). Initial interest in the co-production concept waned by the mid-1980s and through the 1990s due to the increasing focus of scholars and governments on privatization and marketization of public services (Alford 1998; Bovaird 2007). As “new public management” (NPM) became the dominant paradigm for public administration, clients became seen as customers instead of collaborators, and they participated in public services by accepting or rejecting what was offered (Sorrentino, Sicilia, and Howlett 2018; Pestoff 2018). Co-production, in this context, is a tool that public agents can use to improve efficiency of service delivery by sharing some of the work with or soliciting feedback from citizens (Sorrentino, Sicilia, and Howlett 2018; Nabatchi, Sancino, and Sicilia 2017).

In recent decades scholars have shown renewed enthusiasm for the concept of co-production (Nabatchi, Sancino, and Sicilia 2017; Bevir, Needham, and Waring 2019; Bovaird 2007; Alford 1998). Around the turn of the 21<sup>st</sup> century, “new public governance” began to replace NPM as the major paradigm for understanding public administration (Pestoff 2018; Sorrentino, Sicilia, and Howlett 2018; Bevir, Needham, and Waring 2019; Moynihan and Thomas 2013). This model of public administration emphasized the plurality of actors involved in the work of the state and the range of networks, relationships, and activities that bind them together – which re-invigorated the concept of “engagement of citizens in the public service cycle” (Sorrentino, Sicilia, and Howlett 2018, 280) as relevant to the activities of service delivery professionals. In this context of

multi-stakeholder governance, some see co-production as connected to deliberative democracy and other ways of enhancing democratic participation in government (Bevir, Needham, and Waring 2019; Nabatchi, Sancino, and Sicilia 2017). Co-production also has gained interest in light of the global financial contractions of the early 21<sup>st</sup> century, as a way to supplement government activities with resources provided by citizens (Bovaird 2007; Pestoff 2006). Thus, although interest in co-production may have different motivations or origins (Moynihan and Thomas 2013), some idea of co-production can be considered “engrained within cotemporary policy-making and public service delivery” (Bevir, Needham, and Waring 2019, 1).

But its ubiquity does not mean (and perhaps prevents) consensus on a common definition of co-production and how to understand it. Brudney and England (1983) noted diverging definitions of co-production as early as the 1980s. Confusion over what exactly the term refers to and ensuing attempts to define and categorize “co-production” would come to characterize literature on the topic, especially as scholars from various disciplines and with different interests began to use the term (Dudau, Glennon, and Verschuere 2019; Brandsen and Honingh 2018; Nabatchi, Sancino, and Sicilia 2017). The term has been “used to refer to a variety of collaborative governance arrangements that can involve a wide range of actors in a wide range of activities in the public service cycle” (Sorrentino, Sicilia, and Howlett 2018, 277). Scholars have tried to define co-production or delineate particular types based on

- who exactly is involved, e.g., citizens, clients, community groups (Alford 2014; Moynihan and Thomas 2013; Eriksson 2019; Bovaird 2007);



- what part of the process those co-producers are involved in, e.g., design of services, delivery, evaluation (Voorberg, Bekkers, and Tummers 2015; Brudney and England 1983; Bovaird 2007);
- and what is produced, e.g., certain behaviors, public or private value (Alford 2014; Sorrentino, Sicilia, and Howlett 2018; Osborne, Radnor, and Strokosch 2016; Sharp 1980).

Additional confusion results from the varying usage and definitions of the same or similar terms, such as co-production, co-creation, co-governance, co-implementation, co-design, collaborative governance, and citizen participation (Brandsen and Honingh 2018).

As a result, suggesting any overarching definition is “difficult if not impossible,” so I will follow Alford and Freijser (2018, 41) in simply defining what I mean when I use the term. Below I highlight some of the key distinctions in typologies suggested by the co-production literature and how co-production manifests in the school cafeteria.

#### Who Co-produces?

A key distinction in types of co-production is who is involved, that is, who makes up the “co” part of the term (Nabatchi, Sancino, and Sicilia 2017; Sorrentino, Sicilia, and Howlett 2018). Ostrom and her colleagues designated the actors in co-production as “regular producers,” those whose job was to provide the service, and “consumer producers,” those who generally consume the service but may also contribute to its production (Parks et al. 1981; Ostrom et al. 1978). More specific to public services, authors tend to agree that on one side are professional service providers who represent the government and on the other citizens (Nabatchi, Sancino, and Sicilia 2017; Brandsen and Honingh 2018). But the literature suggests many ways to think about who is involved

and what they do, which can include families, neighbors, community organizations, customers, beneficiaries, users, partners, and volunteers.

For example, Alford (2002) distinguishes between citizens and clients on the basis of the value that they receive. Citizens receive only public value, that is, value that is “necessarily consumed or enjoyed collectively” (Alford 2002, 339). Clients, in contrast, are those who directly use public services and thus derive some private value from their co-production activities, such as those who pay for public transit or those who receive disability benefits. Alford further designates users as customers, beneficiaries, and obligatees: customers pay for services; beneficiaries receive them without monetary payment; and obligatees receive services against their will (e.g., prisoners).

Other authors highlight how many people are involved in the co-production activity. Several authors use a distinction between collective, group, and individual co-production, suggesting that individuals produce private value in one-on-one interactions to deliver a service, while collective or group co-production involves multiple actors who are together working to improve a service for everyone or create more public value for all (Brudney and England 1983; Bovaird 2007; Nabatchi, Sancino, and Sicilia 2017). For example, a parent and teacher could work together to create a specialized learning plan for a student in an instance of individual co-production; group co-production could be several parents working with the school to identify and address concerns; and citizens could perform collective co-production by working with the education department to reprioritize spending within the budget.

There are many potential co-producers in the case of the NSLP: nonprofit organizations who provide nutrition education, parents who benefit from not paying for their child's lunch, and foundations who sponsor initiatives to purchase special foods. For the purposes of this study, I am looking specifically at the students involved in the experience of the service, who co-produce with the SFA staff who are the public agents. We can consider students both beneficiaries and customers. No students are exclusively customers since even paid meals are subsidized by the federal government. And while students do not, in most cases, directly pay for their own meals, they do recognize that their parents have paid, giving them a sense of having exchanged something of value in return for the meal.

#### What do co-producers do?

In addition to defining the "co" of co-production, we also must consider the "production" part of the term (Nabatchi, Sancino, and Sicilia 2017). The concept of co-production initially focused on citizens' involvement in the direct delivery of services. Early in the development of the concept, Sharp outlined three types of co-production: "citizen volunteer activities," such as neighborhood watch patrols that produce public safety; "self-help efforts in human service delivery," in which citizens try to bring about positive changes in themselves; and "citizen behaviors affecting service delivery conditions," such as taking garbage bins to the curb for pick-up (1980, 113). The term has now expanded to cover other stages of the process of service provision, such as initiation, design, and evaluation (Nabatchi, Sancino, and Sicilia 2017). For example, Voorberg et al. (2015) distinguish between involvement as a co-implementer (e.g.

participating directly in the activity of the service, such as taking trash bins to the street), a co-designer (e.g., contributing to a program's rules), or a co-initiator (e.g., working with the government to begin provision of a service).

Another question of "production" is what kinds of activities constitute co-production and which do not? Alford (2016) offers a typology of what citizens and/or users might provide as they co-produce – physical objects, information, and behaviors. Other lines of distinction have included whether activities are active or passive, voluntary or involuntary, and "positive" or "negative." For example, Brudney and England (1983) defined co-production as only active, voluntary contributions which enhance public service provision (i.e., "positive"). By this logic, refraining from parking in a snow removal route would not be considered co-production of snow removal because it is a passive contribution. Nor would citizens' activities done out of compliance or coercion, such as paying taxes or following orders when incarcerated, be considered co-production. Further, in this view, co-production can only create more value; it does not destroy it.

While others draw similar boundaries around the definition of co-production (Nabatchi, Sancino, and Sicilia 2017; Brandsen and Honingh 2018), some disagree with these distinctions. Alford (2002), as noted above, considers some coerced behaviors as a form of co-production. Also, several authors note the potential for negative value creation, or co-destruction, as a result of co-productive activities (Sorrentino, Sicilia, and Howlett 2018; Eriksson 2019; Osborne, Radnor, and Strokosch 2016; Alford 2016).

On the question of the active nature of co-production, Stephen Osborne and colleagues have used services theory to argue that co-production is inherent in any kind

of service delivery (Osborne, Radnor, and Strokosch 2016; Osborne 2018). The service is produced by the provider and client during the “moment of truth” of service provision, when the two interact (Osborne, Radnor, and Strokosch 2016, 641). As a result, Osborne et al. (2016) argue that whenever a service (including a public service) takes place, co-production occurs. Because every service requires a consumer as well as a producer, the consumer participates even if coerced or unaware.

Although few other writers go as far as Osborne to say that all services *require* co-production, many do recognize that for some services co-production is inevitable (Ostrom 1996; Alford 2016; Brandsen and Honingh 2018). Whitaker especially highlights co-production in public services like education or health that are designed to change their recipients. As such, “the primary beneficiaries are the clients themselves .... [they are the] ‘raw material,’ ‘finished product’ and ‘consumer’” (1980, 240). The role of the service deliverer is only to help bring about the changes; Whitaker stresses that it is ultimately the recipient who must personally transform in order for the desired results to be achieved, and thus is a co-producer of these results. The classic example of this type of co-production is education: the government can build schools and teachers can give lessons, but students will not learn without active participation, such as coming to class and doing their homework, and the ultimate goal will not be achieved unless students help transform themselves from uneducated to educated.

The NSLP is then an education-like co-production, where the service deliverer offers the opportunity to produce value (education or health) and the recipient is a necessary co-participant. To the extent that SFA staff want to encourage healthy eating

by students, they need students to exhibit these behaviors. If students do not eat at school or do not eat healthy foods, the hunger prevention and health promotion services that the NSLP aims to provide will not occur. Thus, students are co-producing the program even if they choose not to participate. If they do not participate or eat, the NSLP becomes a program in which only certain students eat at school or in which food is prepared but not eaten. In this case, the results of co-production could be hungry students or students that do not eat enough healthy foods – a program in which the desired outcomes are not achieved. Even though many students might not be conscious of their role as a co-producer, their behaviors still matter as they interact with service providers through the program. As Osborne suggests, the service interaction between students and SFA staff, broadly speaking, *is* the moment of truth in the program.

In terms of stages of the implementation process, in the case of the NSLP, students are mainly involved in the delivery of the service. Their active behaviors are required for the program to be delivered as intended – that is, to students' stomachs and not to the trash can. They can also be involved in the design stage (and later I will argue that they *should* be more explicitly involved). In order to avoid confusion in terminology, I will refer to student involvement in the development of NSLP practice and policy (at the school level as well as for the SFA more broadly) as co-design. I will use "co-production" to refer to student engagement directly with the meal experience and their decisions to participate in the program (i.e., take a school lunch) and select and eat certain foods.

### Why Co-produce?

Because students' reactions to the program determines the effectiveness of its implementation, it is useful to consider what might motivate their potential behaviors. Alford (2016) and Nabatchi (2017) offer the frame of public and private value as different products of the co-production process. Alford (2016) defines public value as 1) benefits that individuals receive that are consumed collectively (akin to the definition of public goods) as well as 2) the things that people value beyond their own self-interest, such as "protecting children, upholding human rights or assisting the poor" (Alford 2016, 680). He goes on to note that most co-productive processes will generate both private value, which solely benefits the client, and public value. He gives the example of education, which has social, cultural, and economic value to society in addition to private value for the child in terms of improved opportunities.

Similarly, for school lunch the private value in the short-term would be the child's satiation or enjoyment of the meal. Students may also receive long-term private value from improved health and associated financial and personal benefits. The public value, as suggested by the stated goals of the program, would follow both of Alford's types of public value: promoting the collective value of "protecting children" from hunger while also serving the collective benefit of society via increased human capital and productivity and decreased health care costs. Further, addressing child hunger can also improve a child's ability to learn and participate in school activities, which generates further private value for children and public value for society through their education (Weaver-Hightower 2011) .

Osborne and colleagues highlight that, particularly for service delivery, all value creation is dependent on the client. The service provider can only offer a “value proposition,” which the client may or may not take them up on (Osborne 2018; Dudau, Glennon, and Verschuere 2019; Eriksson 2019; Chandler and Lusch 2015). If they choose not to take advantage of the value proposition, then no value is created. Clients are incentivized to participate in such interactions because they expect to receive private value as a result of using or engaging with the service (van Eijk and Gasco 2018). This value responds to their material interests and is comprised of “their satisfaction with the service, the impact of the service experience upon their well-being and the extent to which it meets their social, health or economic needs” (Osborne, Radnor, and Strokosch 2016, 643). As a result, the role of the service provider is to create in the recipient a desire to co-produce through an appeal to their own private value as well as public value. Although public programs may be provided on a broad basis and for general public value, ultimately services are “interpreted and made sense of by individual consumers by a process of interpretation ... through the lens of [their] context or previous experience” (Dudau et al. 2019, 1584).

Nabatchi, Sancino, and Sicilia suggest that in cases of individual co-production, the public benefits are “spillover effects” (2017, 770) of the private benefits. In the case of the NSLP, when students choose to eat the meal, they create value for themselves. A “spillover” benefit to the public is that they are not hungry and, ideally, their current or future health has been enhanced. But if the student doesn’t eat the meal, then no value, public or private, is created.



### Implications

The literature on co-production emphasizes that the consumer matters greatly to delivery of the service. Osborne and colleagues (2016) give the example of two residential care homes, identical in every way except for the residents, and point out that the outcomes in each home will not be the same, due to differences between residents and the ensuing interactions with them. For Radnor and colleagues, the role of the client means that service outcomes are dependent on “a complex series of, often iterative interactions, between the service user, the service organization and its managers and staff, the physical environment of the service, other organizations and staff supporting the service process, and the broader societal locus of the service” (p. 406). Finding an efficient program design is not enough to ensure desired outcomes; providers also have to manage how that program is delivered, especially their relationships with clients and clients’ expectations for the service (Radnor et al. 2014; Osborne, Radnor, and Nasi 2013).

To that end, Trischler and Charles argue that the user’s value creation process should be the starting point for policy analysis, specifically understanding “[the] individual’s lived experience and the social context in which value is created” (2019, 14). Students have a role in co-creating the value of the NSLP. So policy makers (as well as frontline workers) should pay attention to how students make sense of the service, what generates value for them, and what encourages them to co-produce, while taking account of their specific experiences and context. A “micro-analysis” of users’ “specific needs, motivations, and preferences” (Trischler and Charles, 29) will help illuminate what

encourages them to co-produce in a way that co-creates private, and ideally public, value. As noted above, Lavee and colleagues (2018) suggest that on-the-ground program providers already hold and act on some of this knowledge.

Unfortunately, though, private value may not necessarily generate public value as well: “there is no guarantee that the different types of value will be in harmony with each other” (Alford 2016, 684–85; Dudau et al. 2019; Osborne 2018). Providers of public service must figure out how to negotiate between value creation of different types (i.e. private vs. public) and sometimes among several stakeholders (Alford 2016; Dudau et al. 2019). We can see this phenomenon at work in the NSLP: the foods that may encourage students to participate and create value in terms of hunger prevention may not always be those that also promote public value through health promotion. As such, the role of SFA staff in the co-production process is also important, as they structure the value proposition.

Alford suggests that negotiation between public and private value could be aided by deliberation among stakeholders. Ideally, providers and users of services would work together across the stages of program delivery, from design through production to evaluation (Alford 2016). Doing so requires “deliberately exploring the often conflicting goals and motivations co-producers bring to the process” as well as “challenging assumptions and expectations that are rooted in different knowledge and expertise” that providers and clients may have (Schlappa and Imani 2018, 103). This suggestion highlights that there may also be a role for students in the NSLP not just in the service delivery stage but also in the design stage, i.e., through a more explicit co-design process.

Literature on co-production hypothesizes that involving users in design is a key way to improve the quality of services, make them more efficient, and achieve other benefits such as enhancing democracy (Sharp 1980; Moynihan and Thomas 2013; Bevir, Needham, and Waring 2019; Brandsen, Steen, and Verschuere 2018b; Voorberg, Bekkers, and Tummers 2015). Trischler and Charles (2019) particularly point out the importance of recruiting the knowledge that users of programs have based on their lived experience.

However, several authors note the difficulty of executing such processes in practice (Bovaird 2007; Sharp 1980; Alford 2016; Moynihan and Thomas 2013). For example, Bovaird (2007) notes that service delivery professionals are reluctant to hand over power and may not trust clients. Sharp (1980) suggests the importance of getting buy-in from service providers by stressing the fact that co-production should help ease the service delivery process. Costs of enhancing co-production activities can include the need for increased time and effort from frontline staff and managers and other infrastructure to support co-production (Loeffler and Bovaird 2018).

Co-production also requires increased inputs from service users, such as time to learn about and train for co-production opportunities (Loeffler and Bovaird 2018). Further, clients simply might not want to co-produce, especially in the more active stages like co-design. They may feel like their participation in planning processes is not genuinely heard or acted on and that providers will do what they were going to do anyway (Moynihan and Thomas 2013; M. Crawford, Rutter, and Thelwall 2003; Brandsen, Steen, and Verschuere 2018a). Or clients may not be able to participate adequately and appropriately, or some may be excluded (Brandsen, Steen, and Verschuere 2018a;

Jakobsen and Anderson 2013). For example, Jakobsen and Anderson (2013), in studying parents as co-producers of children's learning, found that already disadvantaged citizens may not be able to participate in at-home educational activities and so will not have the same outcomes as parents who are more prepared to perform the behaviors asked of them by the service provider.

### Research Opportunities

Osborne and Strokosch stress that while co-production seems to be valued, the concept is "significantly under-theorized in the public administration and public management literature" (2013, S40). There are still many theoretical questions especially related to the idea of value – what is value, how it is created, balancing public and private value, the impact of multiple stakeholders, and what it means when there are unwilling service users (Osborne, Radnor, and Strokosch 2016). Several articles also suggest that there is little empirical evidence on the positive and negative outcomes of co-production, or guidance on co-production in practice (M. Crawford, Rutter, and Thelwall 2003; Brandsen, Steen, and Verschuere 2018b; Voorberg, Bekkers, and Tummers 2015). In particular, there seems to be a lack of studies that consider service co-production with clients, especially those engaging in self-transformative behaviors. For example, van Eijk and Gascó (2018) review the literature related to encouraging co-production, almost all of which tries to explain why citizens co-produce, with little attention to what might motivate those in the recipient role. Dudau, Glennon, and Verschuere suggest the need to study "what happens at the interface between front line professionals, ... clients, ... and key service stakeholders. To what extent do the identities of those in interaction

shape service co-design, co-production and value co-creation?” (2019, 1590). Laura Hand particularly draws attention to the fact that “there is little examination of how street-level bureaucrats behave in ... co-productive environments” (2018, 1154).

Studying the NSLP as a case of co-production of a public program offers the opportunity to address some of these gaps. It can offer empirical evidence related to the interaction of program providers and users – what might influence service deliverers as they make a value proposition to clients, and what influences how clients react. Co-production is an inevitable element of the NSLP: student engagement (or lack of engagement) determines the program that is ultimately delivered. However, co-creation of value is not inevitable. Students can choose whether they ultimately co-create private value for themselves and public value for other citizens.

### **Student Participation, Consumption, and Selection in the NSLP**

Understanding school lunch as a site of co-production encourages taking seriously what happens in the school kitchen and cafeteria, where the value proposition is created, offered, and accepted (or not). And indeed, adults have been concerned with part of this question – what is served in schools and what students eat – since even before the creation of the NSLP. Researchers from many disciplines have contributed to the literature related to school food, looking especially at menu offerings, their nutritional quality, and which foods students select and consume. Since introduction of the 2010 Healthy, Hunger-Free Kids Act (HHFKA) regulations there has been an explosion of studies attempting to evaluate recent interventions into school meal nutrition and the resulting diet quality of students.

However, less literature has explicitly tried to understand *why* the NSLP works the way it does, especially by looking at what happens in the kitchen and cafeteria. Some researchers have tried to understand the reasons why certain foods are offered and how students make their decisions about whether and what to eat at school. Only a few studies ask students, and almost none ask cafeteria workers, about their experiences with the meal program or try to understand what happens at school lunch from their perspective. As a result, some of the elements that may influence student and worker behavior have not been thoroughly identified or explored in research on the NSLP. In the sections below, I first review literature that explores what the NSLP offers to students and then cover studies focused on explaining student behaviors in relation to the program.

#### *Understanding What the NSLP Offers*

Historians, sociologists, and legal scholars have provided what little analysis there is of the policy that structures how school meal programs operate (Levine 2008; Ruis 2017; Poppendieck 2010; Harrington 2017; Dillard 2008; Gaddis 2019; Gosliner 2013). Most of this literature focuses on the federal legislation and regulations. For example, Amy Dillard (2008) looked at the U.S. Department of Agriculture (USDA) commodities program, which purchases foods for school use, arguing that it constitutes the “dumping” of unhealthy, surplus foods on American children. Sociologist Janet Poppendieck (2010) provides a broader perspective on the NSLP by including district and school-level policies as well as a range of other social and cultural phenomena that influence the current state of nutrition in school meals. Another sociologist, Amy Best (2017), offers a unique

perspective on school lunch by focusing on students' social lives within in the lunchroom itself. These studies highlight the tensions built into the NSLP, such as its dual mandate to support student health and farmer income, as well as the expectation that the SFA both provide for the needs of all students and operate as a cost-neutral business.

Studies of a different style try to understand what happens in the NSLP by connecting school characteristics to what is served, generally using survey data. These school characteristics include basic demographics (Turner et al. 2016) as well as participation in certain USDA programs, such as those that provide additional technical assistance and nutrition education (Ohri-Vachaspati et al. 2015; Ohri-Vachaspati, Turner, and Chaloupka 2012). Studies at the school level often evaluate interventions designed to improve the nutritional content of the school's offerings, whether federal regulations (Turner et al. 2016; Terry-McElrath, O'Malley, and Johnston 2015) or privately-sponsored health initiatives (Osganian et al. 1996; Schober et al. 2016). As noted by Thomson et al. (2012), few studies have looked at the context of school food service operations in the SFA or school, either to explain how the NSLP operates in practice or how it influences what students eat. Thomson et al. (2012) offer one of the few attempts: they used a nationally representative survey to examine the connection between school characteristics, particular school foodservice cooking practices, and the health of offerings. They found positive associations between healthfulness of offerings and schools that required more training of cafeteria managers and/or cafeteria staff.

Other studies have attempted to understand more specific elements of school meal programs by focusing on interventions (particularly the HHFKA regulations) and how

they were implemented in that school or SFA. Several ask food service or other staff about what makes certain foods easier or more difficult to serve, especially as they are required to serve healthier foods. Overall, findings indicate that making changes to their operations can be difficult for schools and SFAs. SFA staff consistently note their resource and logistics constraints, and in particular the increased cost to purchase healthier foods (Pautz, Jones, and Hoflund 2018; Cornish, Askelson, and Golembiewski 2016; Askelson, Lubker Cornish, and Golembiewski 2015; Sacheck et al. 2012; Urahn et al. 2013). Lack of knowledge about healthy foods and training on how to find and prepare them also influence what schools serve (Askelson, Golembiewski, Bobst, et al. 2017; Thomson et al. 2012; Ohri-Vachaspati et al. 2015).

Most of these studies of school meal provision have tended to use either surveys or interviews with the director of the SFA (Pautz, Jones, and Hoflund 2018; Cornish, Askelson, and Golembiewski 2016; Askelson, Cornish, and Golembiewski 2015; Urahn et al. 2013) and/or other non-SFA school staff (Greaney et al. 2014; Nollen et al. 2007). While these typical informants certainly have some knowledge of what happens at the school level, there may also be issues specific to the kitchen and cafeteria that they do not consider or mention. Rida and colleagues (2019) identified and attempted to fill this gap in the literature related to school food service staff practices, attitudes, and knowledge by asking cafeteria and district-level staff about their experience promoting and providing healthy food at school. Other recent studies also have used cafeteria staff as informants about the operations of the NSLP as well as specifically investigated their beliefs and activities related to the programs (Alcaraz and Cullen 2014; Rosenthal and



Caruso 2018a; Gaddis 2019; Byrd 2016). Alcaraz and Cullen (2014) surveyed Texas food service staff about HHFKA implementation. The work of Jennifer Gaddis (most recently, 2019) also engages with the role of workers in the NSLP and their treatment.

These studies involving cafeteria staff begin to document the role of workers in creating school meals. But overall the available literature on the NSLP does not yet provide an adequate, holistic understanding of the practices by which certain foods are selected, prepared, and served at school. Conspicuously absent are studies that consider the kitchen as an important site for influencing school meal outcomes. There also are few studies that compare across school kitchens, so it remains unclear how school foodservice practices and school kitchen context might make a difference in interventions to improve student health. More investigation of SFA staff activities is needed to better understand how they affect what ends up on the lunch line and whether students eat it.

#### *Understanding Student Behaviors*

There is much literature describing outcomes of the NSLP in terms of what students eat. Particularly since the HHFKA revision of nutrition regulations, many researchers have tried to document exactly how much students eat, especially the amount of healthy foods. Most frequently researchers use either digital or in-person visual observation to compare student lunch trays before and after they have eaten (Amin et al. 2015; Bergman et al. 2014; Cohen et al. 2015, 2016; Gase et al. 2014; Graziose et al. 2017; Haas, Cunningham-Sabo, and Auld 2014; Jones et al. 2015; Moreno-Black, Homchampa, and Stockard 2019; Niaki et al. 2017; Peckham et al. 2019; M. B.

Schwartz et al. 2015; Wengreen et al. 2014). In these “plate waste studies,” the dependent variable is the amount of food consumed, often categorized by part of the meal (e.g., entrée, side, milk) (Cohen, Richardson, and Rimm 2019; Fox and Gearan 2019; Peckham et al. 2019; Kjosén, Moore, and Cullen 2015). Some studies only measure consumption of “healthy” foods, usually defined as fruits, vegetables, and unflavored milk, or look specifically at nutrient intake, such as calories, fat, and sugar (Gross et al. 2018; Ang et al. 2018; Bontrager Yoder et al. 2014; S. Smith and Cunningham-Sabo 2014; Fox and Gearan 2019; Williamson et al. 2013).

Other studies explore similar questions but forego the plate waste element and instead ask students to self-report their produce consumption (Cullen, Watson, and Zakeri 2008; Kubik et al. 2003; Terry-McElrath, O’Malley, and Johnston 2014) or survey students on their eating behaviors (McDuffie and George 2009; Mednik-Vaksman, Lund, and Johnson 2016; W. Gosliner 2014; Kjosén, Moore, and Cullen 2015; Howard and Prakash 2012; Meyer and Conklin 1998). Other researchers use data from meal production records or student purchases to estimate what students are likely eating (USDA FNS Office of Research 2012b; Grainger, Senauer, and Runge 2007; D. B. Johnson et al. 2016).

These studies show that students are less likely to eat fruits and vegetables than any other meal component or food type (Fox and Gearan 2019; Zhao et al. 2019; Mozer et al. 2019; Haas, Cunningham-Sabo, and Auld 2014). A major study by the USDA of a nationally representative sample of schools found that, on average, students did not eat about one-third (31%) of their vegetables, followed by 29% of their milk, 26% of their

fruits, and 23% of their bread or grain side dishes (Fox and Gearan 2019). They ate the most of their entrees and meat items, wasting only 16% and 14% respectively of those types of foods. As Byker-Shanks and colleagues (2017) note, fruits and vegetables are the most studied types of food in the NSLP, and there is little research to put these types of percentages into context, such as by comparing to students' food wastage in other eating environments.

But these studies often do compare student consumption before and after some kind of intervention to assess factors hypothesized to influence what students eat at school. In recent years, researchers have most frequently tried to gauge the impact of the HHFKA guidelines. Overall, this literature has found that the impact of HHFKA on student consumption of healthy foods is mixed but generally positive (Mansfield and Savaiano 2017; M. B. Schwartz et al. 2015; Bergman et al. 2014; Cohen et al. 2014). Several studies evaluate the effect of other types of interventions, such as nutrition education, marketing, farm-to-school programs, gardens, or a combination of initiatives (Graziose and Ang 2018). While nutrition education may be frequently suggested or implemented as a strategy to improve consumption (P. Johnson et al. 2015; Rida et al. 2019; Perera et al. 2015; Gibson and Dempsey 2015), the literature suggests that provision of nutrition knowledge works best in combination with other strategies, such as changes to the school food environment and peer involvement (Meiklejohn, Ryan, and Palermo 2016; Graziose and Ang 2018; Contento 2008; Gorman et al. 2007; Hoelscher et al. 2003). In two different reviews, authors found some positive evidence for "hands-on" approaches such as gardening and cooking programs in changing what students eat at

school (Frerichs et al. 2015; DeCosta et al. 2017); however, one of these deemed these findings “promising but inconclusive” (Frerichs et al. 2015, e53).

Other studies have investigated the relationship of student participation and consumption to elements of the cafeteria and school environment, such as availability of certain foods, time allotted to eat lunch, and the physical features of the cafeteria. Many focus on “choice architecture” techniques which “alter the context in which [student] decisions are made” (DeCosta et al. 2017, 341), such as by limiting unhealthy foods, positioning healthy foods in more convenient locations, and offering produce in appealing forms, i.e., sliced fruit instead of whole, on a salad bar) (Quinn et al. 2018; Frerichs et al. 2015; Graziose and Ang 2018; Cohen et al. 2015). A review by Frerichs and colleagues (2015) noted that compared to other types of interventions there is more literature about and more evidence of an effect for these types of alterations to the cafeteria environment. DeCosta and colleagues (2017) also found that studies showed positive correlations between choice architecture techniques and student consumption; however, they noted the lack of evidence for long-term effects.

Increasingly researchers are considering the impact of the length and timing of the lunch period and have found positive impacts of a longer lunch on student consumption (Chapman et al. 2017; Cohen et al. 2016; W. Gosliner 2014). However, a recent study found no association between student participation in the NSLP or plate waste with the length of the lunch period (Vol. IV). Fewer studies look at other aspects of the cafeteria environment. Frerichs and colleagues (2015) found almost no studies on the aesthetics of the cafeteria. Graziose and colleagues (2019) completed the first study

connecting objectively-measured noise levels and student consumption, finding a negative effect of loudness on student produce intake.

Plate waste studies frequently investigate the relationship between characteristics of students or the student body and which foods they select and consume, looking most often for associations between students' consumption and their age, gender, or status to receive free or reduced-price meals (Peckham et al. 2019; P. Johnson et al. 2015). Of these characteristics, there is the most evidence that older students eat more and eat more fruits and vegetables (Fox and Gearan 2019; Graziose and Ang 2018; Byker Shanks et al. 2017). But most plate waste studies are conducted in elementary schools (Ang et al. 2018; Bergman et al. 2014; Bontrager Yoder, Foecke, and Schoeller 2015; Chapman et al. 2017; Cullen, Chen, and Dave 2015; Georgiou, Martin, and Long 2005; Gross et al. 2018; D. B. Johnson et al. 2016; Niaki et al. 2017; Williamson et al. 2013) with fewer including middle school students (Fox and Gearan 2019; Cohen, Richardson, and Rimm 2019; Quinn et al. 2018; S. Smith and Cunningham-Sabo 2014; Gase et al. 2014) and very few including high school students (Fox and Gearan 2019; Quinn et al. 2018; Haas, Cunningham-Sabo, and Auld 2014). As a result, these associations only reflect a few years of age difference. A few studies show that in some settings female students eat more healthy foods than male students (S. Smith and Cunningham-Sabo 2014); however, others show no difference or that these findings are moderated by age (Byker Shanks et al. 2017; Graziose and Ang 2018). In their review of plate waste studies, Byker-Shanks and colleagues (2017) found no trends in food consumption related to students' meal benefits status.

Relatively few studies use the food itself, i.e., its quality or how it is prepared, as an independent variable, and the findings are inconclusive. Gosliner (2014) found that the likelihood of a high school student reporting eating vegetables and fruits was positively associated with better quality fruit in the cafeteria. Bontrager and colleagues (2015) found elementary schoolers more likely to waste cooked vegetables than raw vegetables but raw fruits more than cooked fruits. In reviewing 49 studies of elementary schoolers' consumption of fruits and vegetables, Graziose and Ang (2018) noted only one that used taste and preparation of the meals as an independent variable (Cohen et al. 2015). That study found that in schools where a chef had designed the meals for improved taste students did not select more fruits and vegetables but ate more of what they took (Cohen, Richardson, and Rimm 2019). Fritts and colleagues (2019) tested the effect of adding herbs and spices to vegetables but found no effect on students' selection or consumption of them.

Fritts and colleagues (2019) included a unique addition for a plate waste study by asking students "Would you eat this item again?" Generally, researchers do not ask students whether they like the foods offered or try to connect what students eat to their own perspective on why. One study using plate waste methodology noted as a main limitation "that we do not know the reasons behind their behavior since we did not interview the children at the time of the study" (Moreno-Black, Homchampa, and Stockard 2019, 8). Byker-Shanks and colleagues (2017), after reviewing 53 plate waste studies, concluded that more qualitative research is needed to address questions about student consumption.

Most studies that solicit student opinions on school meals generally use a survey methodology and focus on why students choose to participate or not in the NSLP. Asperin and colleagues (2010) developed a validated survey to assess the factors influencing high schoolers' decisions to buy lunch at school or not; later researchers adapted and used this tool for middle schoolers (Castillo and Lofton 2012; Kjosén, Moore, and Cullen 2015; S. Smith, Cunningham-Sabo, and Auld 2010). Other researchers have developed their own questionnaires to assess student opinions about the foodservice program (Haas, Cunningham-Sabo, and Auld 2014; Meyer 2000; Roseman and Niblock 2006; Meyer and Conklin 1998). In a nationally representative survey in SY 2014-15, students responded that hunger, convenience, and liking the food are the top three reasons they eat lunch at school (USDA FNS Office of Policy Support 2019b). There is consensus across surveys about the importance of food taste and quality as influences on whether students eat school food (Castillo and Lofton 2012; S. Smith, Cunningham-Sabo, and Auld 2010; Roseman and Niblock 2006; Haas, Cunningham-Sabo, and Auld 2014; Meyer and Conklin 1998). Other common student concerns include the length of the lunch lines and the customer service provided by cafeteria staff (Castillo and Lofton 2012; S. Smith, Cunningham-Sabo, and Auld 2010; Meyer 2000; Meyer and Conklin 1998).

Some researchers have used qualitative methods to explore students' perspectives on their eating behavior in the NSLP (Zhao et al. 2019; Trapp 2018; Asada, Hughes, et al. 2017; Payán et al. 2017; Chatterjee et al. 2016). In a recent study, researchers conducted interviews with low-income students in middle and elementary schools about what encourages or discourages them to finish their school meals (Zhao et

al. 2019). Students cited poor palatability, satiation, cafeteria policies, and social factors as influencing their consumption. Focus groups with students have found them frustrated with the taste and quality of school meals and that they desire “fresher” options (Payán et al. 2017; Chatterjee et al. 2016; Asada, Hughes, et al. 2017). Students noted that the new (i.e., HHFKA) regulations did not make food worse but rather that they regularly threw away food before implementation of the new rules and that they continue to throw food away because they do not like it (Asada, Huges, et al. 2017). Students in traditional public high schools cited the cafeteria environment as a barrier to eating at school, namely the long lines and “chaotic” environment (Asada, Hughes, et al. 2017, 847; Payán et al. 2017). The few studies that have investigated students’ conceptions of healthy foods at school indicate their interest in eating healthfully but the presence of barriers to doing so (Gosliner et al. 2011; Asada, Hughes, et al. 2017).

Overall, students seem to be most concerned about the taste and quality of foods at school as well as other characteristics of the environment such as lines and customer service. However, not many studies have investigated these elements of the student experience or their connection to student participation, consumption, and selection. Guerrero and colleagues (2006) suggest that researchers especially need to attend to student enjoyment of school food, which requires speaking directly with students alongside any quantitative research. Similarly, Moreno-Black and colleagues (2019) suggest the need for ethnographic research to understand students’ motivations for whether and what they eat at school, given the many influences.



In sum, literature on the NSLP currently explores only some of factors that may influence what happens in the cafeteria. Most studies try to explain what students eat by using more easily available and quantifiable variables such as demographic characteristics of the students or features of an environmental or educational intervention. When studies do use qualitative data, informants tend to be district-level SFA employees or non-SFA school staff. Because many of these studies evaluate the effects of particular interventions, there is less focus on the day-to-day workings of the meal program and how they affect what students eat. We also know little about how students themselves think about the meal program and the subsequent influence on their eating behaviors at school. More research is needed to fully explain the actors, practices, and context of school food operations and resulting outcomes; this dissertation attempts to address these gaps.

### **Eating behavior**

Although studies specifically in the school cafeteria may investigate only a limited set of factors, other disciplines, from anthropology and sociology to marketing and food science, have studied eating behavior and what affects it. This literature can offer insight to understand what students eat and why. The sections below cover more holistic ways to think about food decision-making as well as other factors that may be particularly important to children's eating behaviors at school.

### *Frameworks*

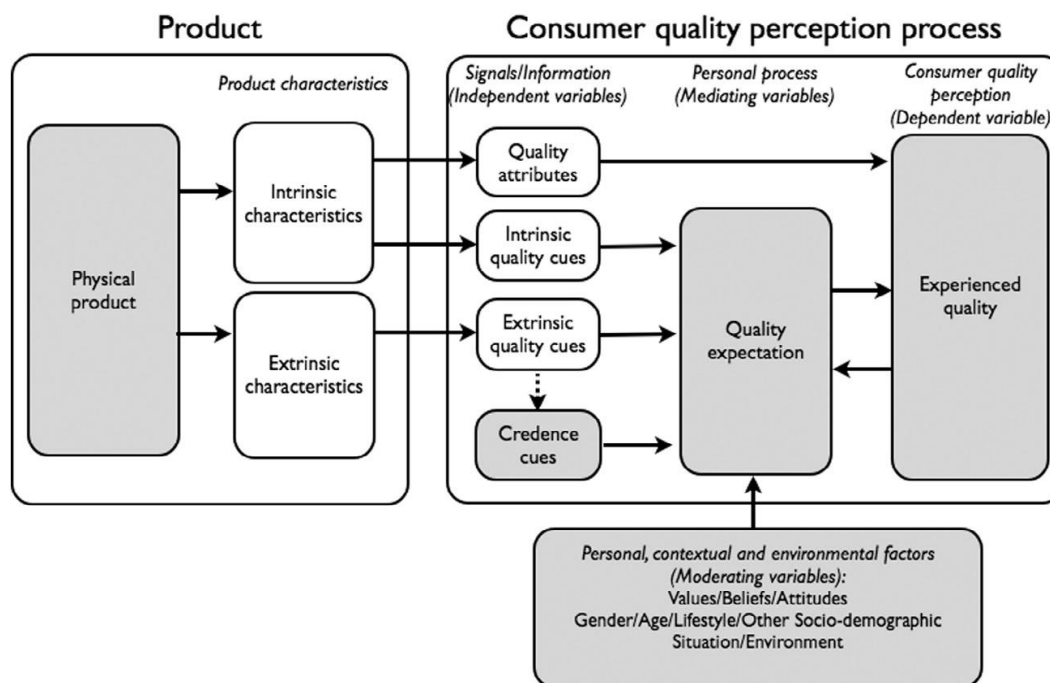
Literature on eating behavior suggests there are many factors that influence what we eat, and several models attempt to categorize these determinants (Stok et al. 2017;

Symmank et al. 2016; Furst et al. 1996; Fernqvist and Ekelund 2014). The Determinants of Nutrition and Eating (DONE) 2.0 framework includes 441 determinants across 51 categories, such as sensory perception, health cognitions, social influence, market prices, and government regulations, in an attempt to bring together all evidence-based determinants in one typology (Stok et al. 2017). Within the school context, social cognitive theory and social ecological models are commonly used to categorize factors influencing students' eating behavior (Booth et al. 2010; Contento 2008; Shirazi et al. 2017; Hoelscher et al. 2003; Stok et al. 2017; Story, Neumark-Sztainer, and French 2002; Graziose and Ang 2018). This paradigm delineates multiple levels of influence on what students eat, such as intrapersonal (e.g., individual preferences and motivations), interpersonal (e.g., role modeling and social norms), community setting (e.g., availability and accessibility of certain foods), and macrosystem (e.g., national policy and economic context) (Story, Neumark-Sztainer, and French 2002).

Working within specific disciplines, researchers have developed models that suggest how certain determinants might work together in particular situations. The fields of marketing and product development focus on the interactions between consumers and items, which can provide insight into students' reactions to particular school foods of school food generally. Food marketing research has explored the connections between product attributes, such as taste, and consumers' overall perception of the item and likelihood to purchase. These studies consider both the attributes of foods that one cannot know before consuming, such as taste and texture, and the cues that signal what a consumer should expect (e.g., appearance, smell, price, and information about the

product's origin) (Grunert 1995; Steenkamp 1990; Fernqvist and Ekelund 2014; Becker 2000). The Consumer Quality Perception Process model (depicted in Figure 2.1) posits that an individual's experience of an item's quality is influenced by these characteristics of the product as well as the consumer's values, demographic characteristics, and environment (Fernqvist and Ekelund 2014).

Figure 2.1. Consumer quality perception process



Source: Fernqvist and Ekelund, 2014.

Consumers' expectations are influenced by cues based on the item, which in turn condition how the individual experiences the food (Fernqvist and Ekelund 2014; Deliza and MacFIE 1996). These specific experiences then affect consumer's future expectations and behavior with regard to that item and similar ones (Fernqvist and Ekelund 2014; Steenkamp 1990).

To understand how individuals make daily decisions about what to eat, we can draw from psychological models. The Food Choice Process Model, developed over

several years by a team of researchers largely at Cornell University, centers on the individual's mental processes and ideals, resources, social framework, and food context as contributors to their eating behaviors (Furst et al. 1996; Sobal and Bisogni 2009; Winter Falk, Bisogni, and Sobal 1996). From the individual's perspective, the process of deciding what to eat may look like prioritizing among various "food values," such as taste, nutrition, managing relationships, and monetary considerations (Winter Falk, Bisogni, and Sobal 1996; Devine et al. 2007; Connors et al. 2001; Lusk and Briggeman 2009). These researchers also suggest the role of food routines and scripts in determining what individuals choose to eat: especially in eating environments that they frequently encounter, individuals will use heuristics to simplify decision-making related to food, such as by categorizing certain types of foods and prioritizing certain values (Ogden and Roy-Stanley 2020; Bisogni, Jastran, and Blake 2011; Sobal and Bisogni 2009; Jastran et al. 2009).

Scholars of critical nutrition would suggest that larger cultural and structural forces also inform the eating decisions that people make, especially as they evaluate the nutritional content of foods and weigh the importance of health against other concerns. Robert Crawford describes health as a "super-value ... a concept that subsumes under its expansive reach all that is good in the personal search for well-being" (2006, 411). He argues that a cultural emphasis on health has had a major effect on how people approach eating, such that they consider a food's contribution to health as its most important value. Charlotte Biltekoff (2013) suggests that a preoccupation with dietary health and conforming to mainstream nutritional advice has long been a way for people

to distinguish themselves as good citizens and avoid the moral failure associated with neglecting one's health and diet.

Hayes-Conroy and Hayes-Conroy (2019) similarly push back on the mainstream understanding of the relationship between food, eating, and the body, naming it "hegemonic nutrition." A major element of the hegemonic nutrition paradigm is nutritionism, a term coined by Gyorgy Scrinis to describe "a reductive focus on the nutrient composition of foods as the means for understanding their healthfulness, as well as by a reductive interpretation of the role of these nutrients in bodily health" (2013, 2). The hegemonic nutrition paradigm encourages individuals to think of a food's value in terms of its constituent nutrients, reducing food quality to calories, fat, etc. and removing all of the "other ways of encountering and experiencing food" (Hayes-Conroy and Hayes-Conroy 2019, 2). Hegemonic nutrition also assumes that there can be standardized relationships between foods and bodies, especially as measured through universal metrics such as body-mass index or serving sizes, and neglects the context of particular circumstances or locations (Hayes-Conroy and Hayes-Conroy 2019). Further, in this paradigm, only experts have knowledge about what is healthy and what to eat, which lay people must accept and follow. Scrinis (2013) instead suggests that we all do and should understand food quality based on preparation and processing, existing traditional and cultural knowledge of what to eat, and our own sensory and practical experience with food.

### *Children's Eating Behavior*

Together, across disciplines, these scholars highlight the many ways of thinking about why we eat what we do and how we understand those decisions – and these ideas are as relevant for children as they are for adults. As suggested above, most studies in schools tend to focus on only a few factors to explain whether and what students eat at school. But studies of what children think and do related to food show that many other factors might influence students' eating behaviors related to the NSLP.

Research clearly demonstrates that, like adults, children prioritize taste when deciding what to eat (Brug et al. 2008; Croll, Neumark-Sztainer, and Story 2001; Ludvigsen and Scott 2009; McKinley et al. 2005; Neumark-Sztainer et al. 1999; Story, Neumark-Sztainer, and French 2002; Contento et al. 2006; Krølner et al. 2011). Other sensory perceptions, such as appearance and texture, are also especially important to children (Krølner et al. 2011; Noble et al. 2000; Russell and Worsley 2013; Waddingham et al. 2018). For example, Krølner and colleagues (2011) found associations between children's liking for vegetables and the sensory experience, such as tasting fresh and raw.

Professed liking for certain items makes students more likely to eat them, especially when it comes to healthy foods (Ogden and Roy-Stanley 2020; Krølner et al. 2011; Story, Neumark-Sztainer, and French 2002). Children also make decisions about what to eat based on what they are used to. Familiarity is particularly associated with liking of certain foods, and exposure to novel foods is especially important to overcome children's natural neophobia, or fear of new foods (Cooke 2007; Krølner et al. 2011). Children also make eating decisions based on what they see as appropriate for that meal or context (Contento 2008; Krølner et al. 2011; Ludvigsen and Scott 2009; Ogden and

Roy-Stanley 2020). These concerns are magnified when students are spending their own money or are otherwise constrained in their choices: they want to know that they will like foods and that they will find them filling enough before they pick them (Krølner et al. 2011; Story, Neumark-Sztainer, and French 2002; R. Shepherd and Dennison 1996).

When asked to explain their eating decisions, children have reported that the above considerations, especially taste, may outweigh concerns about health and nutrition. Some studies have found that children and adolescents see “healthy” and “tasty” as incompatible characteristics – foods that are healthy don’t taste good, and tasty foods must not be healthy (Hermans et al. 2017; Guerrero, Olsen, and Wistoft 2006; Noble et al. 2000). Children are not willing to make a trade-off between health and taste, especially because they may not see healthy eating as their responsibility or a priority, or they consider it a concern for the future (Brug et al. 2008; Ludvigsen and Scott 2009; Roos 2002; Krølner et al. 2011; Ogden and Roy-Stanley 2020).

As noted above, many school food studies look to see if knowledge-based food and nutrition programs influence student consumption of healthy food. These programs assume that students do not know or understand the costs and benefits of eating unhealthy food versus healthy food, and that if they did, they would choose to eat healthy foods (Trapp 2018). But research into young people’s knowledge of what constitutes healthy foods shows they generally have an understanding similar to that of adults (Paquette 2005; Povey et al. 1998). Overall, studies indicate that children and adolescents have adequate ability to identify healthy foods and that their understanding is in line with mainstream dietary advice (Ogden and Roy-Stanley 2020; Paquette 2005;

Croll, Neumark-Sztainer, and Story 2001; Noble et al. 2000). When asked to identify healthy meals or healthy foods, children most often cite fruits and vegetables in general or specific types; other categories of foods, like meat and dairy; or specific items like milk or chicken (Ogden and Roy-Stanley 2020; Croll, Neumark-Sztainer, and Story 2001; Noble et al. 2000). Like adults, children also see how foods were produced and/or processed as an element of healthfulness, with foods that have been less processed or are more “natural” as more healthy (Noble et al. 2000; Harrison and Jackson 2009). Children themselves report feeling confident in knowing what is healthy and that they do not need more information or education on the subject (Croll, Neumark-Sztainer, and Story 2001).

Peers may have more of an impact on students’ consumption of healthy foods. Studies suggest the contribution of peers and social norms on students’ eating behavior, in particular a negative influence on their consumption of healthy foods (Story, Neumark-Sztainer, and French 2002; Best 2017; Ludvigsen and Scott 2009; Krølner et al. 2011; Waddingham et al. 2018; Harrison and Jackson 2009). In their review of the determinants of fruit and vegetable consumption by children, Krølner and colleagues found that students might avoid eating produce because it is not considered “cool” (2011, 30). In a study by Ludvigsen and Scott (2009), elementary schoolers said they may not eat foods that they associate as being for adults, namely healthy foods. But a recent study of adolescents reported that they generally saw healthy eating positively and “a healthy diet as a positive practice to aspire to” (Fielding-Singh 2019, 43). This finding aligns with a few other studies that have found children to have a generally positive perception of healthy



eating, even if they do not prioritize it (Ogden and Roy-Stanley 2020; Krølner et al. 2011; J. Shepherd et al. 2006).

There is no clear consensus on one set of factors that determines children's eating behavior, let alone how such factors might interact. Studies of children do show that characteristics of the food, especially taste, matter greatly to them as they make decisions about what to eat. Many other factors may also influence children's eating behavior at school, from the personal and relational to the environmental and cultural. Studies of the NSLP, which tend to look at school- and policy-based interventions, changes to the food environment, and demographics of students, investigate some of these influences. However, there has been relatively less exploration of the food itself and how it might influence students' participation and consumption as well as the social norms and meanings bound up with school lunch.

## **Conclusion**

The field of public policy implementation has come to acknowledge that those who participate in public programs play a part in how and how well those programs work. The individuals on the front lines of delivering public services make decisions that determine what those services are like. And those on the receiving end also make a difference – what recipients bring to those service interactions influences how they see the service and engage with it. They choose whether or not to take advantage of the proposition offered and thus determine whether or not the value of the program is ultimately created. Moreover, the frontline staff and the recipients of the food influence each others' behavior, as they see and respond to what other actors do.

In the case of the NSLP, this public service dynamic means that student co-production – their engagement in the meal program – is the ultimate determinant of success. If students choose not to eat at school, or do not eat healthfully when they do, then the public value of the program – hunger prevention and health promotion – will not be realized. As a result, it is important to understand what students make of the school meal value proposition and what encourages them to eat at school and eat certain foods. It also is important to understand the school meal from the perspective of the frontline workers who determine what it is like – what do they think will encourage students to co-produce to create value, and what do they try to do as a result?

However, the literature on school meals has largely neglected the perspectives of both frontline staff and students. Researchers have only begun to explore what is offered in the school cafeteria and why, especially as seen by SFA staff. And while there are many studies that attempt to explain what students eat and how to influence it, these do not try to understand how students see the meal service. Because these studies are initiated from an adult perspective, they may be missing key pieces of what determines students' behavior. Eating behavior is complex and multi-faceted, so there is much yet to explore to understand students' participation, selection, and consumption decisions in the NSLP.

## Chapter 3: Researching with Staff and Students

### Introduction

This dissertation contributes to the literature on the National School Lunch Program (NSLP) implementation by using qualitative methods to collect data from meal program stakeholders, namely students and school food authority (SFA) staff. Drawing from six school districts in the southeast and midwest US, I explore 1) how staff and students conceive of quality school meal experiences in the NSLP and 2) how they operationalize those understandings through their program activities. I collected the data as the primary investigator for the *PreK-12 School Food: Making It Healthier, Making It Regional* (MHMR) project, using a combination of individual and group interviews with district-level SFA staff, cafeteria-based SFA staff, and students. This chapter gives an overview of the MHMR project, including participant selection and data collection procedures, as well as the data analysis and presentation methods I used specifically for this dissertation. I also address my positionality as the researcher and some of the limitations of the methods I used.

### Making It Healthier, Making It Regional

The MHMR project was funded by the Robert Wood Johnson Foundation and conducted by School Food Focus (Focus) and FoodCorps.<sup>7</sup> As the primary investigator and a Focus staff member (later a contractor with FoodCorps), I led all aspects of developing and executing the project from the initial conception through the execution of final

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<sup>7</sup> Focus was a national nonprofit that worked with school districts to encourage their procurement of healthful, regional, and sustainable foods. As of January 2018 it merged with FoodCorps, a national service organization that connects children to healthy food in school.

deliverables, with the support of other Focus and FoodCorps staff. The project ran from November 2015 to May 2018, in two phases of data collection. The Rutgers University Institutional Review Board reviewed and authorized the project.

The MHMR project's goal was to document 1) the effects of purchasing healthier and regionally-sourced foods on various elements of SFA operations, such as staffing, budgets, marketing, and menus, and 2) the reactions of staff and students to healthier and regionally-sourced items. The SFA is the administrative entity, usually a division of a school district, which claims reimbursement from the federal government for serving meals in schools. The SFA made sense as the unit of analysis for the MHMR project because it is a common unit of analysis in studies of the NSLP (see, for example, Fox and Gearan 2019; USDA FNS Office of Research 2012a; USDA FNS Office of Research 2008), and Focus directed its efforts at the SFA level, working with SFA directors to encourage changes to district-wide menus and procurement. SFA leadership makes most of the major decisions that determine how school meal programs work (beyond, notably, the funding and nutrition guidelines set by federal regulations and the daily decisions of cafeteria staff as they prepare and serve meals). The district-level SFA staff oversee meal production and service in each school by setting budgets, hiring and training school-based staff, equipping kitchens, setting menus, choosing food vendors, and creating educational and marketing initiatives.

#### *Participating SFAs*

We solicited participants for the MHMR project from a pool of 22 SFAs active with Focus. Inclusion was based on the following factors:

- evidence of successful procurement of healthier and/or regional foods and commitment to continuing and expanding these purchases (i.e., types of changes, how extensive, and future plans)
- high level of engagement with Focus activities (e.g., involvement in other Focus projects, responsiveness of SFA director to requests);
- free and reduced-price meal eligibility rate over 50%;
- student enrollment (to ensure a range in school district sizes); and
- variation in school district setting (i.e., a balance between urban and suburban settings).

Ultimately the SFA participants largely, though not entirely, reflected the selection criteria laid out above. (See Table 3.1 for demographic characteristics of the participating SFAs.) SFAs have been anonymized and will be referred to using the abbreviation listed in Table 3.1. No control SFAs were recruited, since almost all have changed their procurement practices to some extent to be in compliance with the 2010 Healthy, Hunger-Free Kids Act.

All of these SFAs were in sound financial health at the time of the project; none operated at a loss. Overall, these are relatively large school districts, which reflects the criteria for membership in Focus.<sup>8</sup> The school districts located in Florida, Georgia, Kentucky, and Virginia are all within the top 100 biggest school districts in the US; the others are among the biggest in their state. Because these SFAs are so large, most are quite diverse in terms of socio-economic status of residents. While the percentage of students who qualify for meal benefits reflects the average across the SFA, there is variation between schools within SFAs.

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<sup>8</sup> Focus targeted SFAs with enrollment of at least 40,000 students.

Table 3.1. Participating SFA demographic details, SY 2016-17<sup>a</sup>

SFA	Location	School district county classification <sup>b</sup>	Student enrollment	Students qualifying for free or reduced lunch (%)	Lunch participation rate (%)
SFA-FL	Florida	Large central metro	186,332	68	60
SFA-GA	Georgia	Large fringe metro	180,000	42	68
SFA-IA	Iowa	Micropolitan	32,979	74	66
SFA-KY	Kentucky	Large central metro	100,063	68	68
SFA-SC	South Carolina	Medium metro	17,301	35	68
SFA-VA	Virginia	Large fringe metro	89,901	40	62

<sup>a</sup> Most of the project data collection took place in SY 2016-17, and we asked participating SFAs to provide demographic information for this year.

<sup>b</sup> Counties designated as “metro” are part of a metropolitan statistical area (MSA). “Micropolitan” refers to a county that is part of a “micropolitan statistical area,” similar to an MSA but which contains nonmetropolitan counties and has a smaller nucleus.

Source: County classification is from the 2013 National Center for Health Statistics Urban-Rural Classification Scheme for Counties by Deborah Ingram and Sheila Franco, *Vital and Health Statistics* 2(166). Student enrollment and free or reduced lunch qualification rates were calculated using data from the National Center for Education Statistics of the U.S. Department of Education, available at <http://www.nces.ed.gov>. Lunch participation rates were self-reported by SFA staff.

These SFAs also had in common an active commitment to serving what they considered to be healthy and locally-sourced food. In each SFA at least one staff member (two or more in the larger SFAs) championed these values. Often these individuals participated in several state and national opportunities for knowledge-sharing, professional development, and policy advocacy, and can be considered among the most

progressive SFA leaders in the country in terms of their activities to provide healthy and local foods in their program.

None of these SFAs used a food service management company, although at least two used temporary staffing services to hire entry-level cafeteria workers.<sup>9</sup> They varied in terms of infrastructure and processes for food preparation, as detailed in Table 3.2.

Notably, SFA-IA and SFA-KY used a model in which workers at a central food production facility prepare full meals or meal components (e.g., pasta sauce or muffins) for distribution to schools, where staff combine and/or rewarm them. SFA-FL, given their size, used large kitchens at four high schools in a similar way. The capacity of school kitchens, even those in the SFAs with in-school production kitchens, varied within and across districts. For example, in SFA-VA all schools had the equipment to regularly bake bread and cook raw ground beef; the only other SFA to cook any raw meat was SFA-KY, where twice a year schools received and cooked raw chicken drumsticks. Most of the SFAs, even those with the capacity to prepare foods from scratch, relied heavily on industrially pre-made convenience items, such as chicken patties, bread, and pizza. Most attempted to source and prepare at least some fresh produce every day.

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<sup>9</sup> In SY 2014-15, 20% of U.S. SFAs outsourced meal program operations to a food service management company (FSMC). Among SFAs with over 5,000 students, 25.3% used a FSMC, and 38.9% of urban SFAs used one (USDA FNS Office of Policy Support 2019a).

Table 3.2. Participating SFA food preparation facilities

SFA	Food preparation facilities
SFA-FL	Production kitchens at four schools, finishing kitchens at others
SFA-GA	Production kitchens in all schools
SFA-IA	Central production kitchen with finishing kitchens at schools
SFA-KY	Central production kitchen with finishing kitchens at schools
SFA-SC	Production kitchens in all schools
SFA-VA	Production kitchens in all schools

### *Data Collection*

Because of the exploratory and process-oriented nature of our questions, the project research team chose qualitative methods for data collection. Quantitative methods work best for testing hypothesized relationships between variables; in this project, we were interested in the “how” and “why” of meal program operations happening in a particular place, making qualitative methods more appropriate (Arendt et al. 2017; Ragin, Nagel, and White 2004; Denzin and Lincoln 1998). We selected the main mechanism of data collection, the interview, to better understand these processes from the perspectives of those involved and to solicit their opinions (Mack et al. 2005; Rubin and Rubin 2011). We used observation to collect data about school kitchens and cafeterias as well as to triangulate what we heard in interviews (Patton 1999). I made minor updates to data collection tools throughout the period of data collection to reflect new ideas and questions generated by the process (Miles and Huberman 1994).



In Phase I of the project, we began by interviewing the key informant in each of the six participating SFAs, either the director or their designated replacement, via phone (6 total). Then, two researchers visited each district, observing the kitchen and cafeteria of three to six schools suggested by the key informant, for a total of 23 school visits. In each school, the researchers interviewed the cafeteria manager (24 total). The research team also completed between one and six interviews with district-level SFA staff in each district, for a total of 22 interviews, with 26 different staff members. The majority of interviews took place with only one staff member, while some included between and three interviewees. (See Table 3.3 for the titles and school levels of staff interviewed.) The research team also toured the SFA office and central facilities, such as warehouses and kitchens.<sup>10</sup> Over the course of the two-day site visit, we had regular contact with school-based and district-level staff, and these informal conversations augmented our formal data collection mechanisms.<sup>11</sup>

Based on our description of the project's main questions, the key informant in each SFA suggested individuals to interview within the district office. These district-level SFA staff included, depending on the SFA, the director, assistant director, menu planner, procurement manager, chef, training manager, marketing manager, and others. We

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<sup>10</sup> With the exception of the first site visit, the research team was comprised of me and a Research Fellow that I hired and managed. I developed all data collection tools and organized each site visit. I participated in each site visit, conducting approximately 18 of 26 interviews with district-level staff and 16 of 21 interviews with cafeteria managers. I led 11 of 17 student group interviews (see below) and was present for all except one.

<sup>11</sup> The data collection protocol for the MHMR project also included administering a written survey to cafeteria workers and observing meal preparation and service in cafeterias. The data from these collection methods were not used in the formal analysis for this project but informed my general understanding of these SFAs.

chose to interview staff with various roles for insight into different areas of SFA operations, such as staff training, marketing, and menu development, as well as to hear from differently-situated staff about the SFA overall. (See Table 3.3 for titles of district-level staff interviewees.) Also, little previous school food literature has used district-level staff other than the director as informants, so we wanted to include a diversity of perspectives.

We began these 30-75 minute, semi-structured interviews by asking participants about their conception of healthy foods and the SFA's vision for including such foods in the menu. We then discussed specific efforts made by the SFA in the last five years to serve healthy and regional foods and related changes made to SFA operations in areas such as budget, equipment, training, and advertising. We also asked about the reactions of stakeholders, particularly cafeteria and students, to these changes.

The interviews with cafeteria managers covered similar topics, which allowed for comparison of perspectives between cafeteria managers and district-level staff. Few studies have used qualitative methods with cafeteria-based meal program staff (see Chapter Two) despite their important perspective on the meal program. Cafeteria managers are responsible for executing the daily menu, which means they must solve any operations challenges that have not otherwise been addressed, be it a missed delivery or broken kitchen equipment. They also often train cafeteria workers, make some decisions about the menu, such as which types of produce to serve, and manage relationships with other school staff and faculty. And, perhaps most important, they see

and interact with students every day. Interviews with cafeteria managers lasted between 20 and 45 minutes. (See Appendix I for a sample cafeteria manager interview protocol.)

When interviewing, both members of the research team generally followed the interview protocol; we also used probing questions such as “tell me more” and let the informant’s area of interest and expertise guide the discussion (Rubin and Rubin 2011). In school districts where it was permitted, interviewees were offered a \$25 gift card as an incentive. For all interviewees, we assured them of the confidentiality of their responses and that we would refer to them only by title when reporting findings.

Table 3.3. Title and school level for staff interviews

SFA	District-level staff interviewees (32 interviews total)	Cafeteria manager interviewees (24 interviews total)
SFA-FL	Director	2 elementary school (ES)
	Procurement Manager	1 middle school (MS)
	Commodities Manager	1 high school (HS)
	Training Manager (3)	(4)
SFA-GA	Assistant Director	1 ES
	Chef	1 MS
	Procurement Coordinator	1 HS
	Operations Coordinator (6)	(3)
SF-KY	Nutrition Center Manager	1 ES
	Chef	1 MS
	Menu Coordinator	1 HS*
	Nutrition Initiatives Coordinator	(3)
	Director*	
	Procurement Coordinator* Training Coordinator* (8)	

Table 3.3 (continued)

SFA	District-level staff interviewees	Cafeteria manager interviewees
SFA-IA	Director	2 ES
	Interim Director	1 HS
	Executive Chef	3 Area Managers <sup>b</sup>
	Hiring Specialist	(6)
	Menu Planner*	
	(6)	
SFA-SC	Director	1 ES
	Chef-Trainers <sup>a</sup>	1 MS
	(3)	1 HS
		(3)
SFA-VA	Director	1 ES
	Nutrition Coordinator	1 MS
	Marketing Specialist	2 HS
	Training Manager	1 Area Manager
	(6)	(5)

\* Indicates interview recording was lost prior to transcription and thus was not included in the analysis (see footnote 11 below)

<sup>a</sup> These interviewees worked for a partner university and not the SFA. I included them as SFA staff given the way they collaborate with the director of the SFA to plan and deliver training for cafeteria staff, similar to the training manager in a larger district.

<sup>b</sup> Area managers each supervise several schools and provide a link to the district-level staff. Because they spend most of their time in cafeterias and not the central SFA office, I considered them as school-based staff in this analysis.

From the data collected during the first visit, it became clear that we needed students' perspectives to fully understand the impact of NSLP initiatives. As a result, we designed the second phase of data collection to use students as informants. Perspectives of students have been relatively under-studied in the NSLP literature (see Chapter Two). Like other children's health policies, the NSLP is designed and delivered by adults, with little input from its target population, despite the fact that student perspectives could help inform strategies (Wills et al. 2008; Caraher and Drummond 2007). In particular, more qualitative research could contribute to better understanding of children's behavior related to healthy eating and how to encourage it (Caraher and Drummond 2007; Wills

2012; Wills et al. 2008; Darbyshire, Macdougall, and Schiller 2005). The project's key informants also thought students would be a valuable population to speak with, and they appreciated the opportunity for an outside party to solicit feedback on the meal program from students.

During a second site visit to each SFA, the research team conducted two to four student group interviews: five in elementary schools, seven in middle schools, and five in high schools (17 total). To recruit students, the key informant in the SFA recommended schools and either communicated with a teacher or SFA staff member at the school or put the research team in touch with the school representative. (For seven of these group interviews we returned to schools we had previously visited.) As noted in Table 3.4, most of the schools were close to the national average for the percentage of students qualifying for free or reduced-price meals, 48% for SY 2016-17,<sup>12</sup> with a few outliers in either direction.

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<sup>12</sup> Based on my calculations using data from the National Center for Education Statistics (U.S. Department of Education, n.d.)

Table 3.4. Demographic characteristics of students and schools participating in group interviews

SFA	School level	Number of students in interview	Age range of students in interview	Students qualifying for free or reduced lunch (school %)	School lunch participation rate (school %)
SFA-FL	High	6	15-17	53	37
	Middle	5	12-14	52	43
	Elementary	3	6-8	100	98
SFA-GA	High	4	16-19	76	<i>n/a</i>
	Middle	3	13	26	<i>n/a</i>
	Middle II	6	12-13	88	<i>n/a</i>
	Elementary	8	10-11	30	<i>n/a</i>
SFA-KY	High	7	15-18	32	35
	Middle	7	11-15	47	67
	Elementary	7	8-11	60	71
SFA-IA	Middle	8	11-14	78	92
	Elementary	7	8-10	83	<i>n/a</i>
SFA-SC	High	5	16-17	18	76
	Middle	3	11-12	55	69
	Elementary	6	8-11	100	77
SFA-VA	High	4	16-17	45	63
	Middle	7	11-12	53	82
		Total students	Range (mean, standard deviation)	Average free/reduced lunch qualification (school %)	Average lunch participation rate (school %)
		96	6-19 (12.3, 3.3)	58	67
High		26	15-19 (16.4, 1.0)	45	53
Middle		39	11-15 (12.4, 1.1)	57	71
Elementary		31	6-11 (9.4, 1.3)	74	82

Source: Free or reduced lunch qualification rates were calculated using data from the National Center for Education Statistics of the U.S. Department of Education, available at <http://www.nces.ed.gov>. Lunch participation rates were self-reported by SFA staff but was not reported for schools in SFA-GA or for the elementary school in SFA-IA (indicated by *n/a*).

In most schools the student participants were members of a culinary class, agricultural program, or the student council. Each group interview included at least three students, and 96 students participated in total. (See Table 3.4 for demographic characteristics of participating students and schools.) Each student presented a consent form signed by a parent or guardian, and students also signed a consent form before beginning the interview. No incentives were provided for participation.

The design of the student group interview protocol reflected literature suggesting the value of using written or visual data collection techniques with children. Drawing in response to open-ended questions allows for greater student agency, as they can use their own language and categories instead of responding to suggestions made by the researcher (Wills 2012; Honkanen, Poikolainen, and Karlsson 2018; Nomakhwezi Mayaba and Wood 2015; Punch 2002). Visual methods are also helpful to build children's familiarity with the researcher as well as to keep them engaged in the activity and to help them generate ideas in response to prompts (Wills 2012; Punch 2002). We used a modified "draw and write" approach in which students first drew responses to three to five questions related to healthy foods and their conception of school lunch (Nomakhwezi Mayaba and Wood 2015). We used the following prompts:

1. What do you usually eat for lunch?
2. What does a school lunch look like? What do you usually see?
3. What does a healthy lunch look like? What foods would you expect to see in it?
4. What is your cafeteria like during lunch? Who is there? What do you see when you go through the lunch line? What does it sound like?
5. What are your favorite things to eat at school?

Then the facilitator asked students open-ended questions about their understanding of healthy and local foods, whether they saw those foods in their cafeteria, and their thoughts on the quality and experience of school lunch. (See Appendix II for a sample student group interview protocol.)

During the second phase of data collection the research team also conducted follow-up interviews with SFA staff in four districts (4 total). In two SFAs we observed taste-testing activities conducted by the SFA with students and in one district attended an after-school cooking competition hosted by the SFA.

All interviews with staff and students were transcribed by a professional transcription service. The research team coded the data using RQDA, the qualitative data analysis package for R, based on an initial set of codes that I had developed from the project's initial question. The two members of the research team each read and coded a set of transcripts, reviewed the other's coding, and discussed emerging themes as well as any discrepancies, jointly updating the code book as we proceeded. We used this process to analyze all SFA staff interviews as well as other data collected for the MHMR project. Our joint analysis compared the barriers and facilitators to consistently and successfully serving healthy and regional foods in schools, and based on that analysis we released an executive report and a brief case study on each SFA (Rosenthal and Caruso 2018b).

## **Data Analysis and Presentation**

Next I pursued independent data analysis related to the research questions for this dissertation project. I used the nVivo 12 software program to organize and code project materials, using a "generic" coding approach, accompanied by consistent memo-



writing (Lichtman 2013; Saldaña 2013). My inductive approach to data analysis reflects a grounded theory approach, which is commonly used for research on under-theorized topics (Burck 2005). I developed descriptive categories based on the data, and I refined these in relation to one another, ultimately aggregating and disaggregating into more conceptual categories (Glaser 1965; Burck 2005; Huberman and Miles 1998). The data analysis in some respects follows a positivist tradition that uses counting or weighting of comments to highlight themes present for several participants (Denzin and Lincoln 1998). However, I also include in the analysis comments made by even a single participant, which represent that individual's perspective and may also be indicative of what others experience but did not express explicitly.

To do the coding I developed an initial set of codes based on my original research questions and applied these to the middle and high school student group interviews. Throughout this process I updated the codes to reflect participant voices as well as my own new thinking (Saldaña 2013; Miles and Huberman 1994). During this phase of analysis I also updated the research questions to expand from a focus on health to a broader investigation of the overall quality of the meal experience. Initially, I had limited my research questions to an understanding of how SFA staff and students conceive of "health" in the meal program and how they operationalize their understanding through their program activities. Given student concerns, it did not seem possible to separate their perspectives on healthy foods from their experience of the meal generally, and it seemed that any explanation of their reactions to healthy foods would need to be set within the context of their relationship with the NSLP more broadly.

I then reviewed these codings to refine categories and identify patterns that responded to the research questions. I conducted content analysis on the drawings that students had done as part of the group interviews, counting the appearance of particular types of foods (e.g., fruits, vegetables, milk, grains, protein) in response to questions about which foods students usually eat and which foods students like (questions 1 and 5 in the list of prompts above). I tabulated which types of items students designated as healthy in response to the prompt to draw a healthy lunch (question 3 in the list above). Literature on student drawings suggests caution to avoid potential over-interpretation of students' drawings, noting that children's meanings may be different from what adults see (Einarsdottir, Dockett, and Perry 2009; Honkanen, Poikolainen, and Karlsson 2018). The prompts for these drawings elicited relatively straightforward depictions of food items, and in the case of items that I could not easily identify, I confirmed the type of food using the interview transcript in which students talked about some of their drawings, or I considered the item "unidentifiable" in the analysis.

I then coded the transcripts of interviews with SFA staff, making some revisions to the codes based on new ideas and understanding.<sup>13</sup> I conducted a second round of analysis to refine each code and the quotes categorized within it and to identify patterns related to research questions. To respond to the research questions I began by identifying staff understandings of and attitudes toward healthy foods. I then categorized

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<sup>13</sup> I accidentally deleted audio recordings of four interviews with district-level staff and one with a cafeteria manager before they could be transcribed. I wrote down what I could remember and what I had included in my handwritten notes of the conversation. For these conversations, as well as for less formal conversations for which I made handwritten notes, I coded the notes but did not include them in the final count of interviews or the formal analysis.

anything they described as influences on student participation, selection, and consumption behavior in general and particularly in response to healthy foods. I also categorized staff descriptions of elements of a quality school meal experience. Within each topic, I compared responses between district-level and cafeteria staff and across SFAs.

I then reviewed and revised all coding on the middle and high school student group interviews and coded the elementary school group interviews. Using these codings I categorized students' descriptions of the influences on their participation, selection, and consumption in general and of healthy foods, and I compared responses across school levels. I also compared students' comments to those of SFA staff members. To do this comparison I used and expanded on the Determinants of Nutrition and Eating (DONE) 2.0 framework to organize the range of factors that SFA staff and students mentioned as connected to students' eating behaviors (Stok et al. 2017). In order to refine and present this analysis I adapted the consumer quality perception process model offered by Fernqvist and Ekelund (2014) (see Figure 2.1). It offered a useful starting point to identify the most salient factors influencing student and staff perceptions of the meal and, critically, the relationships between them.

In the presentation of these findings I try to include the voices of the study participants as much as possible (Chenail 1995). In order to convey more fully the lived experience of the participants in the study, I use brief composite narratives in four chapters. A composite narrative is a fictionalized account of some element of the research, developed using the researcher's collected data, analysis, and experience in the

environment (Wertz et al. 2011). It is a “reflective story ... a composite picture of the phenomenon emerging from the informants” (Wertz et al. 2011, n.p.). Willis notes that although not frequently used, composite narratives offer an opportunity to translate the richness and complexity of qualitative data to the reader, so they can see the phenomenon in question more clearly (Willis 2019; Wertz et al. 2011). Willis (2019) also suggests that composite narratives can be helpful in making research more accessible to those outside of academia, and she gives an example of the use of narrative composites in helping advocacy groups better understand the positions of policymakers and successfully intervene to affect policy change.

In this dissertation, I use fictionalized third-person narratives compiled from details I observed during site visits or heard from participants during interviews. They reflect both the data and my analysis of it, and they are meant to enliven and elucidate the relationships between categories of findings presented discretely. The narratives also place the findings more concretely within the context of the cafeteria, ideally conveying some of the texture of the experience of eating or serving lunch at school every day. This technique presents a useful complement to including direct quotations from participants, as individuals were less likely to provide a holistic perspective of their daily experience or tie several themes together in a condensed way.

### **Positionality and Limitations**

Overall, the data collection, analysis, and presentation reflect a post-positivist epistemological commitment and a belief that reality exists but may be represented and experienced differently, especially by those with different positionalities (Huberman and

Miles 1998). These differences in how actors see and feel about the same experience are real and must be taken seriously. Informed by methods of participatory research, I consider the project participants to be the experts on their own experience and able to provide important information by which to understand the NSLP (Anderson et al. 2017; Lurie and Riccucci 2003; Fischer 2009). I take students' perspectives especially seriously, as children are too infrequently consulted in the production of knowledge about their experience (Einarsdottir, Dockett, and Perry 2009; Honkanen, Poikolainen, and Karlsson 2018; Caraher and Drummond 2007).

My own positionality as the researcher also matters (Anderson et al. 2017; Rubin and Rubin 2011). I benefitted from pre-existing relationships with several of the key informants in the project, due to my previous five years of work for Focus, the nonprofit conducting the study. I and other Focus staff had positioned ourselves as supportive and non-judgmental allies of the SFAs, which I believe helped me gain access and with a higher degree of trust than would be accorded a stranger. In return, I expressed deference to the SFA staff in several matters related to research design, such as the choice of schools to visit and staff to interview.

In the cafeteria setting, however, my research colleague and I were strangers. Our outsider-ness was in some cases magnified by being from the northern US or by being non-Hispanic. We did fit in to the cafeteria environment by virtue of being women, and I believe our seemingly "natural" interest in activities related to cooking and caring for children facilitated some of our conversations with cafeteria workers as we observed their daily activities.

In relation to students during the group interviews, my research colleague and I were obviously adults and positioned in the role of authority figure, which may have influenced students' willingness to share their true feelings with us (Punch 2002). We tried to maintain an informal atmosphere during the group interview, encouraging students to speak freely in whatever language they wanted to use, and stressed that we did not expect certain types of answers from them. The fact that we were not school or district staff or faculty, and would have no future connection to them, may have facilitated more openness.

A major limitation of this study is students' social desirability bias; especially when we asked about healthy foods, they may have tried to portray what they felt were the "correct" attitudes (Punch 2002). Also, in a group interview students might not feel comfortable dissenting from peers' opinions (Osowski, Göransson, and Fjellström 2012; Ludvigsen and Scott 2009). Further, their drawings may have been influenced by other students or limited by their drawing facility (Honkanen, Poikolainen, and Karlsson 2018; Einarsdottir, Dockett, and Perry 2009; Punch 2002). Similarly, SFA staff, especially cafeteria managers, may have been more likely to share positive stories about the meal program and students' reactions, particularly related to healthy foods.

## Conclusion

As noted in the previous chapter, most studies of the NSLP use quantitative methods, with relatively fewer researchers directly asking stakeholders about their activities related to the program or their perspectives on it. As such, this project's methods offer an opportunity to contribute to questions of *how* and *why* the NSLP works

the way it does. By including SFA staff at the district and school level as well as students, this study offers greater insight into school food as seen by those who experience it every day. Subsequent chapters outline these findings, beginning with the perspectives of students in the next chapter.

## Chapter 4: Student Perspectives

### Composite Narrative #2 – In the Cafeteria

*Lizzy waits in line. It's crowded, and as the kids jostle for position someone accidentally steps on her foot. She tries to push back a bit in return. When Lizzy can eventually see the food, it looks like it's the Asian chicken and rice or some kind of sandwich. And pizza, of course. She's tired of pizza. But she knows the sauce on that chicken is really sweet, and the rice is always dry. She isn't quite sure what's in the sandwich, plus, the lettuce she can see through the plastic wrap looks a little brown.*

*When it's finally her turn, Lizzy asks the cafeteria worker, "Is there any cheese pizza left?" "Veggie or pepperoni," she responds shortly. Lizzy thinks for a second, and the lunch lady starts moving to put a pepperoni slice on Lizzy's tray. Lizzy stops her: "No, no, can I have the chicken?" The lunch lady sighs, scoops out some rice and some chicken, then bangs the tray down for Lizzy to take. At the produce bar, it's some sad-looking broccoli, a bag of carrot sticks, red apples, and grapes. The carrots are too annoying to open, plus they're usually kind of slimy, and with her braces a whole apple isn't going to work. Lizzy tries to look for the best grapes, but the cashier says to her, "Come on, don't forget your fruit or veggie!" so she just grabs the furthest ones she can reach, hoping no one has sneezed on them. She says her identification number and a brief thank you to the cashier, then heads to her class's table.*

*At her table, Lizzy picks through the chicken, looking for the pieces that seem to have the least sauce on them. Her friend Kate use a napkin to take grease off of her pizza, exclaiming, "Ewww, so gross! It's like they pour grease on it on purpose." "How do you eat that nasty food?" asks Sean, who always brings his lunch. Lizzy ignores him and inspects one of the pieces of chicken, wondering if it's all the way cooked. The rice is dry, like she figured it would be, and kind of cold, so she moves on to the grapes. Smushed, but they taste OK. She shouts at Kate over the noise at cafeteria and eats a few grapes. "Hey, are you going to eat that chicken?" asks her classmate Sarah, and Lizzy passes the container over to her. She's about to open her milk when the assistant principal bangs on their table*



*to tell them it's time to dump their trays. Lizzy eats one more grape on the way to dump her tray, then tosses the rest and her milk into the trash can.*

## Introduction

This chapter explores the school meal from the student perspective. The National School Lunch Program (NSLP) depends on co-production: if students don't choose to participate in the NSLP or don't eat what they take, then the program cannot achieve its goals of alleviating student hunger. And if students don't eat foods that are healthy, then the program cannot promote their health. Since students hold the key to whether or not the NSLP is fully implemented, we must understand what motivates them to participate in the program as well as to select and eat certain foods.

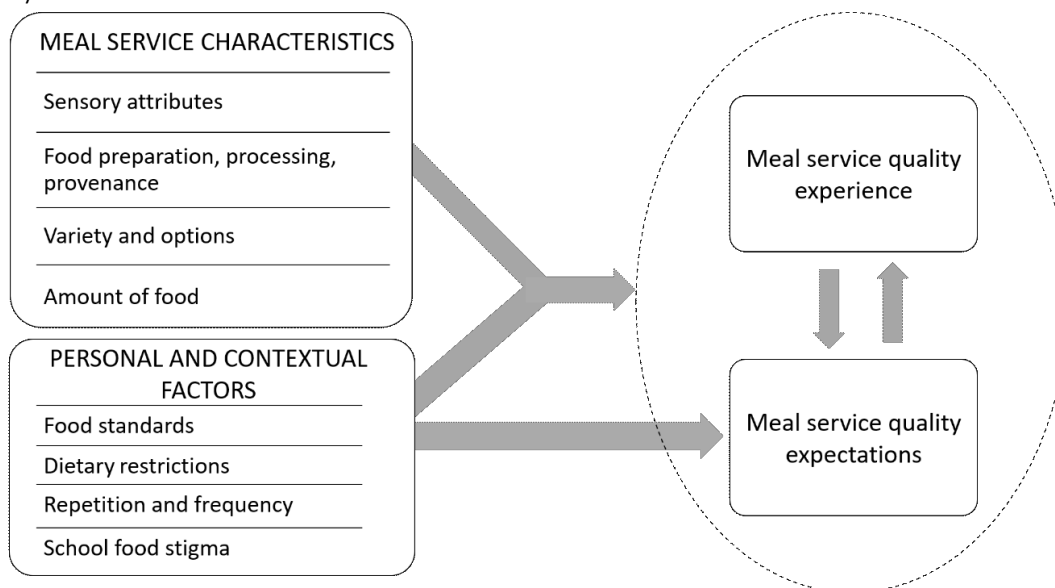
The students included in this study expressed a wide range of opinions about school meals in general and certain foods in particular. As a warm-up exercise in each student group interview, the facilitator asked students for three words to describe school lunch. These ranged from “upsetting” and “unfulfilling” to “edible” and “exceptional.” The word cloud in Figure 4.1 indicates not only the variety of students' feelings toward school food but also the range of elements of the meal program that they chose to comment on – not only how the foods looked, tasted, and were cooked but also their healthfulness, freshness, and safety as well as the experience of the cafeteria.



are a product of cues picked up from the product itself (such as price and appearance) and are also informed by “personal, contextual and environmental factors,” such as values and beliefs, sociodemographic characteristics, and the situational context.

I adapted the Fernqvist and Ekelund model to focus on the characteristics of the meal experience that students described and the personal and contextual factors that seemed to influence them. It reflects students’ perceptions of their own behavior, relying on them as reliable narrators of their own experience, as well as my own analysis of their comments. I find that there are a range of characteristics of the meal service that are salient for students. Personal and contextual factors related to the student, school meal context, and environment influence how students interpret the characteristics of the meal. Together these characteristics and other factors determine both the student’s experience of the meal service as well as their expectations for it. Expectations themselves may color a student’s experience, and in turn, meal experiences influence future expectations. These expectations for what the experience of the meal will be like affects students’ decisions to participate in the meal program as well as which foods they select and eat. Students will be more likely to eat at school if they expect to have a positive meal experience; similarly, they will be more likely to select and eat foods that they expect they will enjoy.

Figure 4.2. Determinants of meal service quality expectations and experience as reported by students

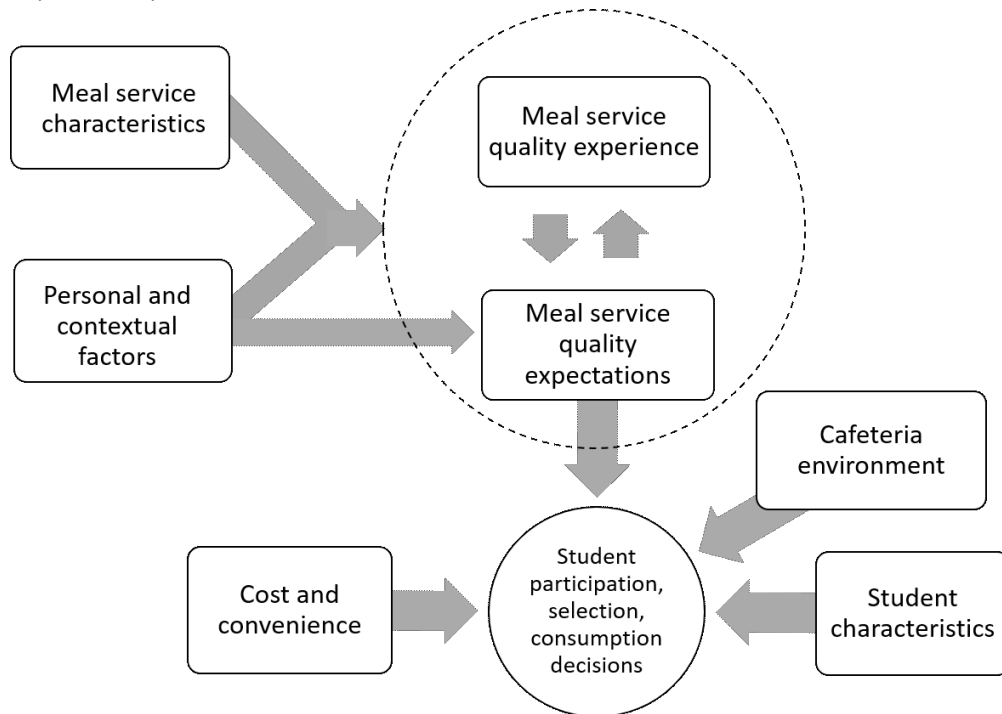


In this chapter I first lay out the characteristics of the meal program that students suggest are meaningful to them. I find that students largely judge the food based on sensory attributes and how it was prepared and processed. Variety, choice, and value matter as well: students want diverse options for what to eat, which are adequately filling, and represent good value. How individual students interpret these characteristics when faced with the cafeteria meal service depends on other factors, some that are personal to them and some that are relevant across students. Students' dietary restrictions and their previous experiences with certain foods influence their perceptions of the meal service, as do features of the NSLP such as the frequency with which students eat at school and the cafeteria environment in which they do.

Other factors beyond the meal experience also contribute to decisions students make about participation, selection, and consumption (see Figure 4.3). Students also described convenience and cost, the cafeteria environment, and personal characteristics

as considerations when they decide whether to eat at school and what they select and eat if they do.

Figure 4.3. Influences on student participation, selection, and consumption decisions as reported by students



Overall, this framework of meal characteristics, personal and contextual factors, and influences on eating behaviors can help us better understand the student response to the value proposition that is the school meal. Student perceptions of the lunch experience influence whether they choose to eat at school, what they select, and what they eat. This chapter demonstrates how student beliefs and experiences affect their engagement with the program and thus whether they ultimately co-create the value the program aims to generate. Isolating the factors that contribute to student behaviors as well as understanding how they work together can show potential areas for intervention to change students' perspectives and activities related to the NSLP.

## Meal Service Characteristics

Foods' sensory attributes are especially salient to students: taste, appearance, texture, and other characteristics largely determine students' experience of foods, both directly and through creating expectations. Students also use cues they get from the meal service, especially how they think foods are prepared or processed, to inform their expectations for its quality. Students also value features of the overall menu: the options available each day, variety over time, and the amount of food they receive.

### *Sensory Attributes*

Unsurprisingly, students had a lot to say about the taste of school lunch: students in every interview group talked about the taste of the food in some way. Of their initial three words to describe school lunch, many mentioned the taste of the food, using adjectives from “delicious” to “bland” to the ubiquitous “nasty.” Overall, students generally described the taste of school lunch somewhat negatively – that it “doesn't taste the greatest” (MS-GA). Many students described the poor flavor of specific foods, such as water that tastes like nail polish (ES-GA), fruit that tastes like hand sanitizer (MS-IA), or cheese that tastes like rubber (MS-KY). However, students did seem to think that, as one high schooler put it, “some [foods] have good tastes” (HS-FL). Students noted foods that they enjoy, such as strawberries that taste like “Christmas morning” (MS-VA) and “delicious” bell peppers (MS-GA II).

Students frequently highlighted that foods might have no taste at all. In ten groups, students described the lack of seasoning or flavor in school food generally or in particular foods, especially as compared to what they are used to eating at home or elsewhere. A student in a middle school in SFA-VA described the school food as having

“absolutely no flavor,” and students mentioned a lack of seasoning especially for vegetables (see Chapter Six for more on this sentiment).

Students used poor taste or lack of taste to explain why they don’t eat lunch at school or don’t eat certain foods. In a high school in SFA-VA, one student noted that the food being “bland” means students aren’t inspired to “go back the next day and get some more.” Students at a middle school in SFA-GA said they or other students don’t participate in the meal program because it “tastes bad.” High school students in SFA-FL specifically said that their expectation that certain foods taste bad means they don’t choose those items and that in general they don’t eat the food when it doesn’t taste good. Some students explicitly cited the taste of the food as the most important criterion for judging school meals. One commented, “I just want food ... that's tasty.” Similarly, a middle schooler in SFA-GA noted that his peers “just care if it tastes good.” In response to a question about the one thing they would change in their cafeteria, students in five groups specifically mentioned the taste or seasoning of foods (ES-GA, MS-GA, MS-GA II, MS-SC, HS-SC).

Students in nearly every group also expressed concern about how school foods look, which may reflect the aesthetics of the item or point to the role of visual cues and ensuing expectations. They noted food that looks “like plastic” (MS-VA, MS-FL, HS-FL), like “mush” (MS-FL) or inedible (ES-GA). Students described school foods looking like they weren’t cooked, like they were overcooked, or just not “appetizing.”

The appearance of the food influences whether students choose to go through the lunch line at all. High school students in SFA-KY noted that they check to see how the

food looks in the line or on other students' trays before deciding to get lunch that day. In middle schools in SFA-GA and SFA-FL students reported that they don't eat fruit that looks "processed" or pizza that "doesn't look very good." High school students in SFA-FL and SFA-KY and middle school students in SFA-IA and SFA-VA explicitly said that they would be more likely to select and eat foods if they looked "good" or "appetizing."

In describing foods they do and don't like at school, students also frequently referred to the item's texture. In all but two group interviews students described textural qualities of school foods. Items might be too hard (bread, rice, peanut butter sandwiches, fruit, or fries) or soft (apples, broccoli, potato wedges, or grapes), too wet (fruit, fries, or tortillas) or too dry (salads, chicken, or cheese). They described foods as lumpy, bruised, chewy, grainy, slimy, or feeling like "plastic" or "tin foil" in the mouth. Students especially commented on cheese, particularly on pizza, describing it as dry, not stringy, greasy, watery, and "soupy and chunky all at the same time" (MS-IA). In nine groups, they mentioned greasiness, especially related to pizza. Some students explicitly connected poor texture to why they or their peers don't eat certain foods, such as apples, rolls, and rice. A middle schooler in SFA-FL explained that she likes the cafeteria's "mystery meat" but doesn't eat the rice that comes with it because "it's dried out."

The word "fresh" came up in over half the student groups to describe foods that students liked or wanted to have, and in four other groups students used words like "stale" or "rotten" about foods they did not. A high school student in SFA-SC noted the more appealing taste of fresh foods, saying that "if you go buy a bag of frozen stuff out the store versus eating something fresh, you can tell the difference." Perceived freshness



can influence students' selection decisions: in reporting the foods that he enjoyed eating for lunch, a middle school student from SFA-GA explained that, "most of the time, [the peanut butter and jelly sandwiches] are not fresh, so I barely get them." Freshness also matters to students not only as a characteristic of the food itself but also as a signal of the quality of preparation (described in more detail below).

Students also noticed when foods were not executed as they would expect, in terms of temperature and doneness. Students in one high school, five middle schools and two elementary schools commented on finding foods, including broccoli, pizza, and chicken nuggets, that seemed either burnt or undercooked. Students also noted several items that were served too warm, such as salads, or too cold, including juice, salads, cheese, cinnamon buns, and peanut butter sandwiches. To some students the cold temperature indicated that foods might not be fully cooked, as described by the high schooler in SFA-VA who threw away his chicken sandwich when he got to a cold part that was "more raw and uncooked than cooked."

#### *Preparation, Processing, and Provenance*

The preparation, processing, and provenance of school foods also emerged as salient characteristics of the meal experience for students. Students' perceptions of how foods were prepared or processed often served as a cue for food quality and influenced students' expectations for how foods would taste. When students articulated the underlying problem with certain types of preparation or processing, it often had to do with the resulting product, and they thought that different food sourcing or preparation could contribute to more tasty and appealing meals.

Students found it self-explanatory that food would ideally be fresh and made in their cafeteria by the cafeteria staff. All students described fresh foods positively, such as suggesting that the best way to improve the cafeteria would be “just fresher food” (HS-FL). Freshness might show up in different ways. Students perceived frozen and canned foods negatively and preferred fresh items, especially for produce (Chapter Six will explore this finding in more detail). Students in two schools commented on vegetables that had been frozen, noting their bad taste and watery consistency. Students also wanted freshness in terms of the length of time between when an item was prepared and when it was served. A middle school student from SFA-FL suggested that “if they actually put the right amount of food out I think that they could go through the food faster and we would get fresher food.” Students in two schools especially thought focusing on freshness would mean fewer foods that were expired (ES-GA) or moldy (MS-IA).

Students also wanted “fresh” preparation; as a middle schooler put it, the cafeteria staff “should start making fresh food” (MS-VA). Another middle school student, from SFA-VA, thought it would be “better” if the food service workers “made the pizza, like, in the back with fresh cheese and pepperoni, ... they put it in the oven and take it out.” Students in five middle schools and three high schools expressed a distaste for foods that had been made elsewhere and reheated. Students at middle school in SFA-GA and high school in SFA-KY singled out microwaving as particularly unacceptable. A middle school student in SFA-FL went into detail about the way that the school’s plastic

containers melt into the food when they are reheated, concluding, “I don't want plastic in my food.”

In general, students demonstrated a sense that it is part of the responsibility of the cafeteria staff to cook, although some recognized that this might be difficult. As one middle school student from SFA-VA put it, “You guys are the lunch ladies, you’re supposed to be making food.” Another middle schooler recognized that making food in the cafeteria kitchen would be more work for the staff “but would be better for us” (MS-GA II). A high schooler in SFA-VA noted that they “don’t need to make everything from scratch” but clearly valued that they do make some items in-house.

At times students talked about the provenance of foods, that is, where they came from or the brand that had manufactured them. Some made connections between the poor quality of the food and where it had been purchased: a middle schooler from SFA-KY said, “I think they get it at a real cheap place and bring it to the school and feed us.” An SFA-GA elementary schooler reported that his peers say the food comes from “dump-fil-a” (wordplay on the popular brand Chik-Fil-A). At two schools where students did not think the staff could make the food well they suggested that foods manufactured by brands such as DiGiorno, Dominos, or Burger King would be preferable. One student expressed that the staff from Little Caesar’s “should teach the cafeteria ladies how to make pizza” (MS-VA). Another suggested that foods would be better if procured from a farmers market, garden, or supermarket, with Walmart as a last resort (MS-VA).

Students also used food packaging as an indicator of food quality. Middle schoolers in SFA-KY vividly described an experience seeing lunch ladies prepare taco meat:

- Student 1: I seen one of the lunch ladies, she got a big bag, and it was full of the taco meat. She was over there doing this, trying to get it out.  
 Student 2: I saw that. It was trifling. I didn't eat that.  
 Interviewer: Oh, like trying to squeeze it?  
 Student 2: Like they put in the bag, like jail food.

Students at a middle school in SFA-IA reacted similarly negatively to a student's story of seeing macaroni and cheese coming from a bag. Students also referred to food packaging cues such as expiration dates and having received food they thought should not be served. In five groups students explicitly mentioned getting or seeing expired or spoiled milk, some claiming they no longer drink milk from the school as a result.

These kinds of negative experiences with the safety and sanitation of specific foods colored students' perceptions of the foods in general: as a middle schooler in SFA-IA explained, "there's always that one long piece of hair in my mashed potatoes. [It] just makes you want to quit and not eat anymore." For some students, there seemed to be a sense of mystery about how cafeteria foods are prepared and where they come from, often associated with concerns about safety. As a high school student from SFA-KY described, "you don't know ... what you're eating. They might be giving you something and you don't know what they're putting in it." A middle schooler from SFA-GA described school lunch as "secretive because we like barely even know where our food comes from .... You don't know where it came from, and it's really hard to know if it's like actually good for you to eat." This lack of trust can affect what students choose to eat. One high

school student from SFA-FL noted that she prefers the packaged peanut butter sandwiches because she can “trust” them, whereas she cannot trust the food “that they make” to be safe and clean, using as evidence an anecdote about a friend finding a roach in her school pizza.

### *Variety and Options*

Students at all levels and across districts suggested the importance of having appealing options to choose from every day. Students spoke negatively of days on which they could not find anything they wanted to eat or felt forced to choose something because it was the only acceptable option.

In almost all middle schools as well as two high schools and two elementary schools students explained the lack of options as often a result of the cafeteria running out of food. Many groups said that for students eating in later lunch periods or at the end of the line, “sometimes they run out of food you want” (MS-FL). This would be especially likely “if it’s something that is really good that everybody likes” (HS-KY). Students often expressed anger or a sense of unfairness at not getting what they had signed up for (some elementary schools ask students to choose their entrée in the morning) or what they would like: “It’s just messed up,” an elementary schooler from SFA-SC put it.

In addition to what students saw as a lack of options available each day, they also frequently commented on the lack of variety in the menu over time. SFAs generally design their menus such that options are served in the same configurations and a given day’s menu will repeat every week or every few weeks. An elementary school student in SFA-GA described their experience of the menu this way: “They just have one week

something, another week, another week. And then it starts all over again.” A middle schooler in that SFA said, “It’s kind of constant, like they have the same things very often.” Even high school students from SFA-SC, who were pleased with the options that their cafeteria offered, noted that, “[lunch] is kind of the same. You always have your Asian food line, and then you always have your chicken sandwich and chicken nuggets, and then you always have the salad bar and the pizza line. Then, there’s one that’s kind of different sometimes.” Students positively noted the special items that cafeteria staff prepare on occasion, such as holiday meals or desserts like blueberry cobbler. Middle school students in SFA-FL expressed pleasure regarding a new Caribbean bowl on the menu, which they felt offered diversity.

In terms of items that they tired of, students most frequently mentioned pizza. Students in three middle school groups and one high school group noted how often it is served, in two cases “every single day” (MS SFA-IA). A middle school student in SFA-VA used “lazy” as one of their three words to describe school lunch, explaining, “I said that because they keep putting the pizza on there. The first day of school, it’s like okay. Then it just gets repetitive.” Students at a middle school in SFA-GA were particularly upset about a recent week in which the cafeteria had served pizza three days in a row. One student said, “That was the only time I’ve never gotten a main course, because I normally don’t eat pizza for three days in a row.” Another put it succinctly: “Pizza three times in the same week is not cool.”

In addition to pizza, students expressed frustration at the repetitiveness of fruit and vegetable items and requested a greater variety of types of produce. (See Chapter

Six for more details.) Two students also noted how often chicken items are served.

Overall, many seemed to agree with the high schooler from SFA-KY whose words to describe school lunch were “Boring food. A low variety.”

### *Amount*

Bringing to mind the opening from *Annie Hall*,<sup>14</sup> students also judged the amount of food they are usually served, generally finding it to be inadequate. In six of seven middle school groups, as well as one high school group and one elementary school group, students mentioned that either the serving size of particular foods or the amount of food overall is not enough for them. As an elementary school student put it, “We don’t really get that much to eat” (ES-SC).

In terms of specific foods, students wanted more of their preferred entrée and potato items, such as mini corn dogs, pizza rolls, potato wedges, and chicken wings, in a serving. As two middle school students from SFA-IA discussed:

- Student 1: They're acting like they're feeding kindergartners.  
 Student 2: Because they'll have the little chicken poppers that are this big,  
 and you'll only get four. That's supposed to fill up what, my dog?  
 My hamster? A person? No.

As the items mentioned indicate, students seemed particularly concerned about getting enough meat. Students in two different middle schools described entrée items in which the ratio of chicken to rice, bread, or vegetables was something that “people don’t like” (MS-KY).

Middle school students explained that they need more food “because we're going through a lot and puberty and stuff” (MS-VA). “I eat two big plates at home. And then I

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<sup>14</sup> “There’s an old joke. Two elderly women are at a Catskill restaurant. One of them says, ‘Boy, the food at this place is just terrible.’ The other one says, ‘Yeah, I know. And such small portions.’”

come to school and like, ‘This is a snack. This is the smallest snack ever,’” said a middle schooler in SFA-FL. One from SFA-IA claimed that, “If you see my plate, it's filled top to bottom with food. I eat. They don't understand that.”

Students also weighed in on the consistency of portion sizes. In three middle schools students note that cafeteria staff might serve some students more or less of items like chicken nuggets, or that some pieces of pizza might be much bigger than others. In SFA-FL a high school student noted that portion size of some items might be too much and for others not enough.

### **Personal and Contextual Factors**

The way that students react to these characteristics of the school meal service – the sensory attributes of the food, how foods were made, and the variety, options, and quantity of the meal – is influenced by factors related to the student and the context of the NSLP. Student expectations for certain types of foods are influenced by their past experiences with those foods and resulting standards for them. For several students dietary restrictions influence their perceptions of school meal service quality. For all students the cultural stigma attached to school food and the frequency with which students eat at school also impact how students experience the meal service and what they expect of it.

#### *Food Standards*

When describing the food in their cafeteria, students frequently judged foods as being “real” or “fake.” To them, “real” food was clearly desirable while “fake” food was not. In 12 of 17 group interviews students described school food in general or particular



foods as “real,” “actual,” “fake,” or “artificial.” This designation as real or not indicates that students hold in their minds some idealized version of school food or particular items, and the actual food in front of them may or may not meet that standard.

Standards for sensory attributes seem to especially influence students’ ultimate perceptions of quality: the school pizza or apple is seen as good if it aligns with their expectations for its taste, texture, temperature, appearance, and doneness. Many of the descriptions of negative sensory experiences indicated a divergence from what the student expected. Students described ranch dressing that “doesn’t taste right” (ES-GA), enchiladas that look “fake” (MS-VA), and chicken that doesn’t seem “real” (HS-FL). Foods might not look like what they’re supposed to, even to the extent that students claimed it “doesn’t look like food” (MS-VA) or they can’t tell what items are. Students often mentioned food textures that seemed off, especially cheese, such as the comment by an elementary schooler that the mozzarella stick isn't "all the way regular cheese, like you would bite in a mozzarella stick from another place" (ES-KY). Responding to cheese described as “soupy and chunky all at the same time” a student explained, “It's fake. That did not come from no cow” (MS-IA).

Preparation and processing also affected food’s status as real or not. Strawberries that had been frozen were not considered “the real deal” by a middle school student at SFA-VA. In a high school in SFA-GA, a student said food at home is “freshly cooked” and “more real” than food that had been “microwaved” at school. And responding to the taco meat she’d seen come from a bag, as described above, a middle schooler in SFA-KY said,

"I'm not really comfortable with eating fake food. That's just a little ew. Why can't we have real food?"

Food from well-known brands or restaurants was generally considered "real": when asked what real food would be, a middle school student in SFA-KY said "having different types of pizza every day," like Papa John's and Domino's. Similarly, students described foods that come from the grocery store as real. They also noted that knowing a food is from a particular location, if advertised in the cafeteria, could demonstrate its realness.

Students gave some indications as to how they had developed these standards. Often, their standards seemed connected to what they eat at home. For example, students accustomed to eating highly seasoned food at home may find school foods lacking in flavor and not meeting their expectations for taste. Students from a middle school SFA-SC and a high school in SFA-GA specifically said that foods taste different at school from what they're used to at home, both noting that "home foods" have more flavor and seasoning. As the high schooler put it, "people are used to different cooking at home, and they have high standards when they come to school" (HS-GA). Another student in that group attributed her judgment of the school's food to her cultural heritage, explaining, "I'm Colombian, and we value having a lot of flavor in food." Similarly, high school students in SFA-SC attributed student complaints about the food to the fact that in this Southern region they're used to "home-cooked soul food" with "butter and lard" that can't be used in school meals.

Students also used what they eat outside the home to judge school food. One student's praise for the school's apple crisp was that it reached "food court quality." They especially evaluated school pizza against corporate versions: students in three middle school groups compared the pizza at school to fast food chains such as Domino's and Little Caesar's (MS-KY, MS-VA, MS-GA II). Students also compared particular items and school food in general to Chik-Fil-A, Olive Garden, and local restaurants that served what they considered quality food.

#### *Dietary Restrictions*

In general, elementary and middle school students were very aware of restrictions related to allergies and expected that the meal program would account for these needs. An elementary school student in SFA-IA said, "I like how [the lunch ladies] give [soy milk to] my friends that are allergic to milk." When making suggestions for improvements to the meal program, some students qualified their requests with appropriate considerations for dietary intolerances, such as suggesting more nuts but noting that it would be hard given students with nut allergies (MS-IA).

Students with dietary restrictions especially found the lack of options and variety to be a problem. Students in two schools wanted more options for those who don't like or can't drink milk (ES-GA, MS-KY). In one high school and two middle schools students noted the lack of diversity in their meal program's vegetarian or vegan options (MS-IA, MS-GA, HS-GA). Two explicitly noted that a peanut butter and jelly sandwich is often the only meatless choice (MS-GA, HS-GA).

### *Repetition and Frequency*

As noted above, students often complained about being “bored” by school food.

Variety seemed especially important to students because of how frequently students eat school meals. High schoolers in SFA-VA stressed how often students eat at school and for how long:

- Student 1: They need to change it up because you don't wanna eat the same thing every week for almost like--
- Student 2: For three years, kind of just gets like ... We only have two days off from that, on Saturday and Sunday.

As individuals approach familiar eating situations, they develop scripts or routines to ease their process in making decisions (Jastran et al. 2009; Sobal and Bisogni 2009). Students may develop habits, eating the same thing every day. A high school student from SFA-SC suggested that this can lead to “burn out.” He said, “I used to eat chicken sandwiches all the time, and I just got burned out. Like, I don't even want to look at a chicken sandwich.”

Given how frequently many students eat at school and the repetition of items, students’ experiences of quality become a major factor in their expectations. Students have many opportunities to experience particular items and solidify their expectations of their sensory attributes. Students believe that they know what the pizza or the lasagna tastes like and whether they will or won’t enjoy it. Over time, they may also build up more visceral experiences of certain foods, such as associating them with some element of unsanitariness (such as seeing mold in a milk) or an instance of sickness. One middle schooler from SFA-GA said, “I still don't trust the hot dogs,” after getting sick on a day he’d eaten them.

Students' reactions to school meals also seem to be influenced by their peers' experiences. Several students reported stories about friends' interactions with school foods, from finding a roach in the pizza to other students vomiting after a certain meal. These past experiences color what students expect of their future expectations for particular foods every time they see them in the cafeteria.

### *School Food Stigma*

Some of these stories about bad experiences with school meals were told with the quality of an urban legend, supporting a general stigma against school food. Similarly, a few students referred an overall negativity about school food from their peers, which conditions their expectations and may keep them from eating at school. One elementary schooler in SFA-GA described fellow students who “say that [school lunch] is disgusting and have heard what other people have said it tastes like, and I'm just thinking, ‘Why do you listen to someone else. Haven't tried it for yourself.’” A high school student from SFA-GA noted that her friends “always speak so negatively about [school lunch], all the time.”

These stories and attitudes tie into longstanding cultural associations that suggest that school food is unappealing, mysterious, unsanitary, and low-quality. In recent years, these tropes have at times been made more salient by negative national attention to school food related to the Healthy, Hunger-Free Kids Act (HHFKA) (Confessore 2014; Winett et al. 2018). For example, in 2012 a brief national trend saw students posting photos of unappealing school meals to social media platforms using the hashtag “ThanksMichelleObama” to indicate their displeasure with the inadequate quantity and

quality of school meals (and associating it with the First Lady's support of the HHFKA reforms).

### **Influences on Participation, Selection, and Consumption**

The expectations that students have for the meal service or for certain foods influence whether they decide to participate in the NSLP and what they select and eat if they do. But these expectations are not the only influence: as students described their interactions with the NSLP, they alluded to factors that did not directly relate to their expectations for the meal service yet still made a difference to whether and what they ate at school. Figure 4.3 above depicts these influences: student characteristics, cost and convenience of meals, and the cafeteria environment.

#### *Student Characteristics*

Students in six groups reported that they eat the food at school because they are hungry (HS-FL, HS-KY, HS-VA, HS-SC, MS-IA, ES-IA). Usually they used hunger to explain why they might eat even if they don't like the food: "Depending on the day, I don't want to eat, but I don't want to be hungry, so I eat it anyway even if I don't like it" (MS-IA). In some cases, students might end up realizing they like something when forced to eat it out of hunger. An elementary school student in SFA-IA described realizing she liked the school's teriyaki chicken: "When it first came, I was, like, I'm not gonna like this. I didn't want to eat, but then I was like, 'Uh, I'm hungry,' so I might as well try it, and I tried it, and it tasted really good."

In the high school group in SFA-SC, students referred to their level of hunger influencing which foods they select. One student explained that "It's all about filling up

your tray because you have to eat something for the rest of the day,” while another said, “If I don't feel really hungry one day, I'll get a parfait.” Hunger also can influence participation on a daily basis. When asked how many times per week he usually goes through the lunch line, a high school student at SFA-KY said, “It depends on if I'm hungry. So, like, every day.”

Students' dietary restrictions also affected whether they eat at school and what they chose. A few students said that they or other students chose to bring their lunch or are limited in their selection because of personal dietary restrictions. These may be by choice, such as veganism; due to allergies; or part of family religious practices. For example, a middle school student in SFA-GA said that he does not eat pork or beef because of his religion and is allergic to garlic and onions, making it quite difficult for him to find options at school. Similarly, he noted that most of the other students who attend his temple “say there's nothing for them to eat” so they bring their lunch. Middle school students in SFA-FL and SFA-IA also mentioned that keeping kosher or not eating pork meant they chose to bring lunch from home.

Another middle schooler in SFA-FL and one in SFA-SC mentioned other students who do not eat at school because of health conditions, namely allergies and diabetes. The student in SFA-FL described her sister's experience having a soy allergy, saying, “We couldn't get her any school lunch because we didn't know what's in it.”

#### *Cost and Convenience*

We did not ask students directly about their status to receive free or reduced-price meals, so it's unclear how family economic status and food insecurity might

influence these students' likelihood to participate in the meal program and to eat what they are offered. Most of the schools where we conducted interviews had a rate of qualification for free or reduced meals similar to the national average (around 50%), with a few outliers in either direction (see Table 3.4 for school demographic details).

At a high school in SFA-FL students openly self-identified as receiving free or reduced-price meals, without any prompting from the interview facilitator. As part of her introduction, one student said, "I got reduced lunch so that's why I get Uncrustable peanut butter and jelly sandwiches." Another explained that she doesn't get free lunches anymore because she was "too lazy to fill out the application," so she packs a lunch instead. However, she'll eat the school food if a friend who qualifies for a free meal doesn't want it. Another student who doesn't qualify for free lunches suggested that she would take advantage of the program if she could:

- Student 1: If they offered more free lunches for people who actually wanted the free lunches ... 'cause I want the free lunch, but I can't because I don't qualify for it.
- Student 2: I think they need to open the qualifications more, that's the thing.

Similarly, one middle school student in SFA-FL also self-identified as qualifying for a free lunch, explaining that she eats at school because "I have it free too so it's just easier for me to eat that lunch."

Other students echoed this sentiment regarding ease and convenience. Students in two middle schools and three high schools reported that they choose to get lunch at school because they don't have the time or the inclination to pack a lunch, and neither do their parents (which may relate to the family's income or the adults' responsibilities



for work and care). A middle schooler from SFA-GA explained, “I started to eat school lunch because I never really had the time to, like, get up and make a lunch for myself.” For a high schooler in SFA-GA, “My mother just, like, stops cooking. I was like, okay, I guess I'll have to eat.” Two middle school students also mentioned eating at school when they forget to bring their lunch.

Middle and high school students also used calculations of value in judging school food and deciding whether or not to eat at school and what to get. Three students explicitly noted that school lunch is “bad value” (HS-KY). A high schooler in SFA-VA described lunch as “two, three dollars for stuff that does not taste good. It's not fair that people have to pay.” High schoolers at SFA-GA claimed that price is their main concern when deciding what to get for lunch, with middle school students in SFA-SC and SFA-GA also noting the price as an element in deciding whether particular items such as slushies or breakfast sandwiches were worth getting.

### *Cafeteria Environment*

We asked students about their experience of the cafeteria, both going through the lunch line and eating, and they vividly described what it's like for them to eat at school. They almost all described their cafeteria as loud, and many also found it crowded and dirty. One student noted “we lose our appetite when we look at the floor” (ES-GA). Students themselves did not explicitly connect the cafeteria environment to whether they eat at school and what they eat. However, literature on eating behavior does suggest that the physical environment can influence people's consumption decisions (Graziose et al. 2019; Rollings and Wells 2018; Cardello and Meiselman 2018).

Students did draw direct connections between the time they have for lunch, the length of the lunch lines, and their eating behavior. Middle schoolers in four groups described not having enough time to eat as a result of long lines. As a student from SFA-KY put it, “They rush all the time, and I never get to eat long enough.” “Lines are super long on some days and once you get your food, sometimes you only have five minutes to eat and then ... ‘Dump your trays,’” explained a student from SFA-VA. Four of five high school groups said that long lunch lines mean that by the time they go to the cafeteria, get their food, and find a seat, they are left with little time to eat. As a result, “you just sit there and speed eat” (HS-KY). The discussion between two students in SFA-VA highlighted many of the trade-offs students consider as a result:

- Student 1: What's the point of going buying lunch when you know what time you get out you have maybe seven minutes to get lunch?
- Student 2: Yeah that's me, see the line, I'm like I'm not even going to eat lunch today.
- Student 1: You want to grab your meal, sit down with your friends and legit have a conversation.
- Student 2: It's not even that, you just don't have enough time to eat by the time you get out.
- Student 1: You want to enjoy the food you eat, and not just sit there and wolf it down.

Students described how they cope with the long lines, for example, by choosing the foods that are most convenient. “It’s not that pizza is great or anything like that. It's just kind of, you know, it's there. They can get it. It's convenient, and they can get out,” said a high school student from SFA-FL. Other students at that school said many students simply choose not to eat because of the inconvenience.

## Implications

Students suggested a wide range of influences on their decisions about whether and what to eat at school: personal characteristics, cost and convenience, the cafeteria environment, and, foremost, their expectations of what the meal service will be like. These expectations in turn are largely determined by students' experiences with the meal service, and several characteristics are particularly salient to creating the student experience, as they report it.

The food itself especially matters. First and foremost, students want to eat foods that taste good to them. This includes not only the flavor but also the appearance, texture, temperature, and other sensory attributes of the food. Students are constantly judging whether foods will meet their standards for quality. They get information to make this decision from how they see or think the food is prepared and what the product looks like. Certain associations signal quality, such as food that is made by staff on-site, the appearance of freshness, and certain brands.

Students also use their past experiences with cafeteria food in general and with certain items in particular to anticipate what foods will be like. They may also use what they know about their peers' experiences. Each time a student decides to eat lunch at school or makes a decision about what to get and whether to eat it, it's not simply a one-off transaction between the student and what's on the menu that day. Students judge what is offered using the totality of their past experiences with the meal program. Quality expectations and perceptions thus can become a mutually reinforcing loop. If students have a positive experience of a food's quality, they will have positive expectations the

next time they are offered the item, which can then positively impact how they experience it. However, the opposite may also occur, and negative perceptions or judgments of quality can become self-reinforcing – cafeteria food is “nasty,” school lunch is “bad.”

Over time, these judgments and perceptions solidify. Time and repetition play a major role in structuring students’ eating behavior. Students come to know what to expect from the school meals program. They develop not only a sense of which foods they like but also strategies to maximize their enjoyment of lunchtime. These solidify into habits, such as always getting pizza, bringing a lunch, or avoiding the cafeteria altogether. Students may be reluctant to deviate from their patterns due to the risk they see in choosing an item that they are unsure they will like. Students are only allowed to take a maximum number of items (unless they pay for more), so if they don’t want to eat what they’ve taken, they will leave the cafeteria hungry or unsatisfied. Decisions about consumption similarly reflect a sense of scarcity and habit: because of limited time, it makes the most sense to first eat what one knows one will enjoy, leaving other items to be eaten if there is time.

However, despite the fixity of student habits, the process of evaluating and making decisions about the meal program is in constant motion: every day, with different food options that vary in taste or different opportunities to go through the lunch line, student perceptions of the meal program could change. By looking at the factors that contribute to student expectations for school food quality, we can assess the meal program elements which staff might want to focus on to improve student perceptions of

school food quality – and thus make students more likely to select and consume school meals in general and certain foods in particular.

An underlying theme of student quality assessments is trust. Students need to trust that foods will taste good and be safe in order to select and eat them. This raises the question of how to build more trust between students and the meal program. How can cafeteria staff (and SFA staff) communicate to students that the foods offered are well-prepared and will taste as students expect those foods to taste? One way is through the cues that students use to anticipate an item's quality. Appearance cues are particularly salient, so staff may want to focus on providing foods that look appealing, not only in terms of presentation but also freshness. Staff should also pay attention to cues related to preparation. Students might respond well to indications that foods have been prepared on-site, such as smelling them as they cook or seeing staff finishing off preparation of certain items. Students also might notice indicators of food safety, such as cafeteria staff wearing hair nets and gloves and the cleanliness of the cafeteria environment. Such signals tell students that they can trust the foods offered in terms of safety and quality.

Ideally, food items would not only communicate to students the signs of freshness and safety that they are looking for but also correspond to the other standards that they have for items, making them “real” in students' minds. It is crucial that the actual attributes of the product then match the cues; otherwise, students have another reason to mistrust the cafeteria. For example, high school students in SFA-VA expressed disappointment about the pizza, noting that “[the box will] say Domino's pizza but that's

not Domino's." Although the school does buy pizza from Domino's, because the taste does not meet their expectations students assume that the cafeteria staff is using old boxes for a different pizza.

Over time, improving students' experiences with individual foods might begin to lessen the overall stigma of school meals. While much of what students said about the cafeteria was negative, students also frequently mentioned elements of lunch and particular foods that they enjoy or even love. In many groups, students mentioned a favorite item which they frequently returned to in talking about the cafeteria, whether the chicken and waffles, meatball sub, or fresh-baked cookies. Students also spoke mostly positively about lunch experiences in the past – several high schoolers fondly remembered their middle school lunches, and middle schoolers reminisced about elementary school food. Even elementary school students talked about how food had been better in earlier years. This indicates that while students' negative experiences with school foods will color their expectations, they are open to the idea that school food *could* be good.

Better engaging students in the processes of providing school food might be another way to build trust in the meal program. This could mean providing more transparency about how meals are prepared and the safety standards which cafeteria staff adhere to. Truly involving students in meal program decisions might also improve expectations for the program. This might take place through a representative body of students who could also act as ambassadors for the program or through finding ways to engage all students in evaluating and giving feedback on the meals program. Such a

strategy could assist cafeteria staff as they attempt to make product attributes align better with student standards, namely by hearing directly from students about what those standards are.

## Conclusion

This chapter described the factors that students suggested influence their eating behavior at school, and in particular their expectations for the quality of meal service. Together, these offer a picture of how students judge the offering of the NSLP. We see what affects their decision to take advantage of this public program, that is, whether to co-produce the program intended by legislators by eating healthy foods. Students will not choose to do so if they do not see that they will generate private value, i.e., by having an enjoyable eating experience or at least becoming satiated. And if students forego this private value, they will not contribute to generating the desired public value of healthy, “hunger-free” students.

These clients’ eating behaviors determine whether the policy succeeds. If these clients co-produce in such a way that school food is prepared only to be thrown away, the program has not been successfully implemented. Thus all of the elements laid out in this chapter, from the food itself to the variety of the menu to students’ past experiences, ultimately influence the implementation of the NSLP. As such, to encourage positive student co-production, program implementers should be aware of and account for this broad range of factors that affect whether students eat at school and eat healthy foods.

And indeed, SFA staff do have their own understanding of which characteristics students value in the school meal and how personal and contextual factors affect them. The framework presented in this chapter for visualizing students' meal service experiences and expectations will allow us to compare student perspectives to those of SFA staff. While we should trust that students are adept narrators of their own experience, there may also be influences that they do not highlight or notice. In the next chapter I look at what SFA staff members think students value in their meal experience, the personal and contextual factors that they see influencing student expectations and experiences, and the other elements, beyond expectations, that affect student eating behavior.



## Chapter 5: Staff Perspectives

### Composite Narrative #3 – Behind the line

*As the sixth graders flood the cafeteria, the staff take their places behind the line and brace themselves for the noise. Even though she's the manager, Ms. Nancy is helping serve today since one of her ladies is out sick. She thinks the kids will be happy with the menu – they like anything chicken. She warmly asks the first student, "What would you like for lunch today?"*

*Only ten minutes later, she's less pleased. More students are taking cheese pizza than she expected, and when she went back to the warming oven to restock, she realized it was broken again. So no more cheese pizza for now. Maybe some students will take the veggie pizza instead, but she's not holding her breath. The district makes them serve it, but kids in this part of town probably haven't even ever seen a vegetable on a pizza, so they're not likely to try it here. At least they got the grapes delivered in time – she's tired of seeing whole apples go in the trash.*

*Mr. Ellison, the district menu planner, watches as students dump their trays. Lots of bags of carrots they didn't even open. He thought they'd like it better in the bag – they could save it for later. But maybe it's too hard to open? Or maybe it's just kids and vegetables. He's been thinking they need to offer another produce choice or two; maybe then they'd each find something they like. But looking at that overcooked broccoli, he's not sure how many more items the staff can handle prepping.*

### Introduction

This chapter explains how school food authority (SFA) staff members see students' reactions to the school meals program and the other factors shaping their participation, selection, and consumption behaviors. Explanations of National School Lunch Program (NSLP) implementation tend to focus on the formal policy text and the effect of legislation and regulations at the federal level. These lay out the required

nutritional values of the food and structure the program (primarily through funding and the lack thereof) to guide schools toward serving certain types of foods. But while the policy sets firm boundaries of what is possible, within those parameters district-level staff choose types of foods to serve and what characteristics they will have as well as how to try to make them appeal to students. Cafeteria staff also make decisions about what to serve and how.

Seen through the lens of co-production, the program implementers must create a school lunch that offers enough potential value to students to induce them to eat. If students do not eat healthy foods at school, no broader public value (i.e., that of current healthy students and future healthy citizens) will be achieved. Since policy legislation and regulations do not offer guidelines on how to create a value proposition that appeals to students, implementers use their own beliefs to guide their practices as they create an offering for their clients. SFA staff must figure out what will encourage students to choose to eat at school, to select particular items, and to actually eat them.

In this chapter I explore how staff answer these questions and what they do in their day-to-day meal program activities as a result. I use the framework introduced in the previous chapter to understand staff members' perspectives on the factors affecting students' eating behavior. My informants indicated certain characteristics of the meal service that they saw as important to students and also suggested the contextual factors and characteristics of students that they saw influencing students' experiences and expectations of the meal service. And like students, SFA staff also saw elements beyond

the meal service itself that they thought shaped students' ultimate behaviors with regard to participation, selection, and consumption.

SFA staff operationalize these beliefs as they implement the program: the services they provide are influenced by the characteristics of the meal experience that they think are important to students. Staff members' ideas, especially about the food and the role of familiarity, guide their practices as they try to determine the types of foods to put on the menu (e.g., pizza or meatloaf, broccoli or jicama), how to source them, and the characteristics they should have (i.e., in terms of taste, appearance, and preparation style). Staff also try to influence students' expectations more generally through marketing of the program.

Figure 5.1 shows the model from the previous chapter from the perspective of staff. (*Italicized factors represent those suggested by both students and staff.*) I find that SFA staff think the food served, defined by the type of food it is and its sensory attributes, is the main influence on students' perceptions of the meal program. Some also see how the food was prepared or processed and where it came from as important, but others don't think these characteristics matter to students. Staff also noted student desires for variety and options, convenience, and good customer service.

SFA staff especially stressed that students' experiences with food outside of school influence how they experience school meals. They also noted that a general stigma against school food as well as the cafeteria environment affect students' experiences of, and especially their expectations for, school food.

Figure 5.1. Determinants of meal service quality expectations and experience as reported by staff

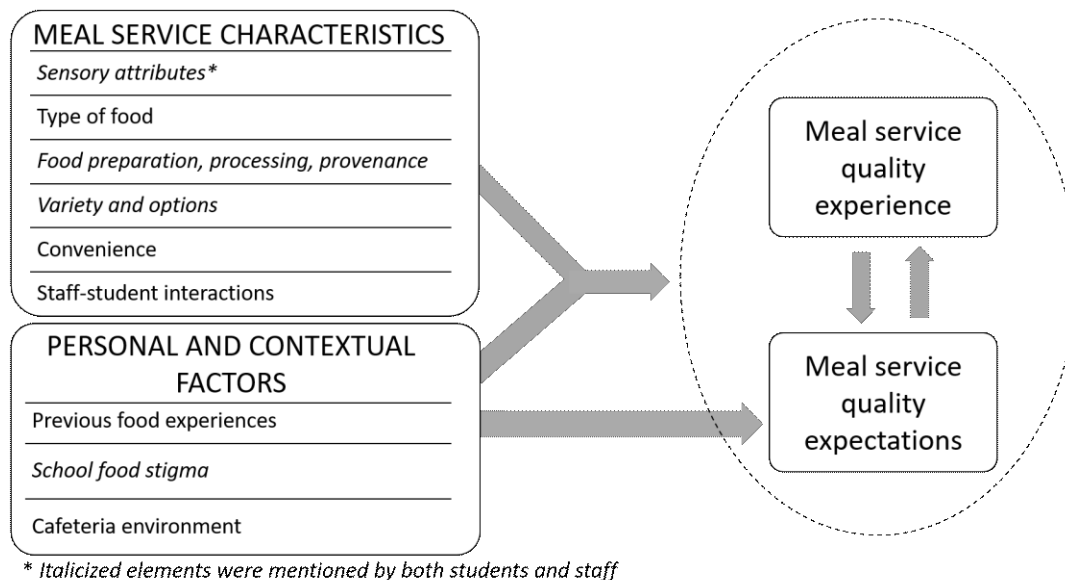
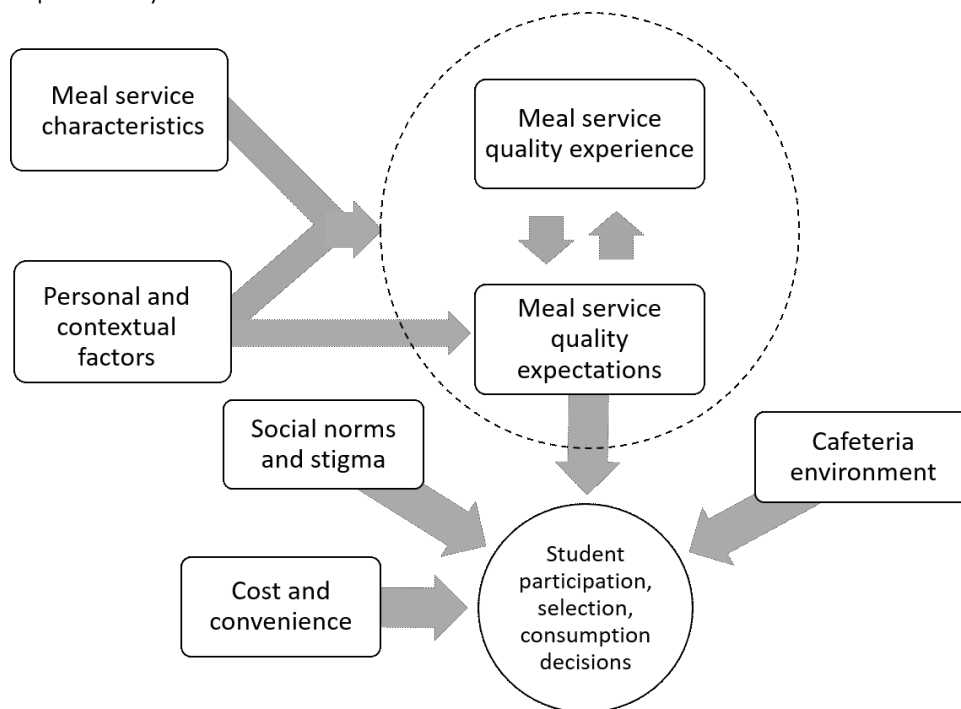


Figure 5.2 depicts the factors that SFA staff suggested influence student eating behaviors beyond the meal service itself. They saw the students' families' need for the meal and its relative cost as a major factor in student participation as well as related social norms and stigma. Some staff also described a role for the cafeteria environment in affecting students' selection and consumption decisions.

Figure 5.2. Influences on student participation, selection, and consumption decisions as reported by staff



## Meal Service Characteristics

### *Sensory Attributes*

SFA staff consider taste of foods to be preeminent in student perceptions of school meal quality. A district-level staff member in SFA-GA explained that students will eat foods that are “delicious,” and district employees in SFA-IA, SFA-KY, SFA-SC, and SFA-FL expressed similar sentiments that taste is what matters most to students. Six cafeteria managers referred to students eating or not eating either specific items or school food in general because of the taste (2 Area SFA-IA,<sup>15</sup> ES SFA-IA, HS SFA-VA, MS SFA-VA, ES SFA-FL). Other staff did not necessarily tie the taste of foods explicitly to student consumption

<sup>15</sup> As noted in Chapter Three, area managers each supervise several schools, often of different levels. Because they spend most of their time in cafeterias, I considered them as school-based staff in this analysis.

but expressed that foods tasting good is important for the meal program. Good taste can even outweigh other characteristics of the food: in the words of an SFA leader in SFA-VA, “You can’t serve something that’s healthy but tastes awful.”

SFA staff mentioned the importance of how food looks almost as much as they talked about taste. A district-level employee in SFA-SC described removing a pear from the serving line because it didn’t meet his standards for appearance, saying that if fruit doesn’t look good, the students “kind of look at it, put their nose up.” A district staff member in SFA-GA commented that even if they’ve put an appealing item on the menu, it won’t matter to students if it’s “shoved in a clamshell,” that is, packaged without attention to how it looks. An SFA-KY employee said that as she chooses items for the menu, she thinks about which are “going to be attractive and get [the students] to come in.”

Cafeteria managers in particular recognized the importance of making foods look “appealing” and “appetizing.” Thirteen managers referred to the way foods look as influencing student consumption or selection, or as something important to pay attention to (2 Area SFA-IA, Area SFA-IA, 2 ES SFA-IA, HS SFA-IA, ES SFA-SC, MS SFA-SC, HS SFA-SC, MS SFA-GA, MS SFA-VA, HS SFA-VA, MS SFA-KY, HS SFA-FL). Five of them used the phrase “you eat with your eyes first” to explain why they focused on the food’s appearance (Area SFA-IA, HS SFA-IA, ES SFA-SC, MS SFA-VA, HS SFA-VA). As a high school manager in SFA-FL explained, “Presentation is very important ... because that’s the first impression of the customer.”

A few meal program staff noted other sensory attributes of the food that they think matter to students as well. Five district-level staff referred to the importance of the right texture or mouthfeel of chicken patties (SFA-VA, SFA-FL) or other items (SFA-KY, SFA-VA, SFA-GA). Four cafeteria managers mentioned specific items for which the texture matters to students – they want crunchy Romaine, juicy oranges, and chicken sandwiches and celery sticks that aren’t dry (Area II SFA-IA, 2 ES SFA-IA, HS SFA-FL, HS SFA-VA).

Three district-level staff suggested that students want foods served at the appropriate temperature (SFA-KY, SFA-GA) or may be skeptical of foods that mix hot and cold (SFA-FL). Similarly, a middle school manager in SFA-KY went into detail about her efforts to get her staff to make sure the food is at the right temperature - “keeping hot foods hot and cold foods cold.”

A few district-level staff members made direct connections between freshness and enhanced student appeal: one in SFA-GA said that fresh foods taste better, and another in SFA-SC claimed that making fresh pizza allows for a more consistent product which more students purchase. Five cafeteria managers in four SFAs explicitly noted that students prefer fresh foods in terms of produce (i.e. corn, cauliflower) and entrée preparation (i.e. pizza, drumsticks), or in general (Area SFA-IA, HS SFA-FL, Area SFA-VA, HS SFA-VA, HS SFA-SC). For example, the manager at a high school in SFA-FL said that “a high percentage of [the students], they like the food because it’s fresh.”

#### *Type of Food*

SFA staff referred to the types of food on the menu as important to students. Both district-level staff and cafeteria managers often described certain foods that

students collectively do or do not like and thus they should or shouldn't serve. For example, a staff member in SFA-SC recounted having to take a vegetable soup off the menu: "It was a good item, it looked good, five vegetables in the soup, and kids just didn't like it."

SFA staff try to serve types of foods that students expect to like – which will encourage students to participate in the meal program that day or will be appealing to select as they go through the lunch line. SFA staff may be wary of serving items they think the students won't recognize. "You can't get too far ahead of the kids," said a district leader in SFA-FL. Meal program staff at times connected these likes to age. A district employee at SFA-IA suggested that "kids are going to go for the pizza." Similarly, a cafeteria manager in SFA-VA described a broccoli salad as "for adults," while others referred to the need to prepare things "in a way that kids will eat it" (Area SFA-IA) or to serve items that kids like (MS SFA-GA).

#### *Preparation, Processing, and Provenance*

SFA staff referred to the way foods were prepared, manufactured, or produced as important to the quality of the meal service, though they may not always think these characteristics influence students' perceptions. As they talked about food production, processing, or preparation, staff explicitly or implicitly referred to certain types of foods as of "quality" or "better." Characteristics like local, seasonal, fresh, well-cooked, clean label, and whole muscle<sup>16</sup> were considered to reflect higher quality. Although staff did

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<sup>16</sup> SFA staff used the term "whole muscle" to distinguish from the "chopped and formed" chicken products commonly served in schools. Chopped and formed chicken items, such as chicken nuggets, are produced using chicken that has been mechanically separated and reconstituted using fillers and additives. Whole muscle items, such as a breast filet or drumstick, contain only chicken.



not often refer explicitly to student perceptions of these items, some implied that these elements of “quality” may increase appeal to students. For example, all six SFAs sourced or wanted to source items with whole muscle chicken as an improvement over more common chopped and formed items. “Kids love the [chicken] made with whole muscle,” reported a staff member from SFA-FL. A district leader in SFA-KY suggested getting “higher quality” products like whole muscle chicken on the menu had encouraged participation.

Freshness, both because of and in addition to its desirability in terms of taste, is seen as a way to enhance both experience and expectations of quality in the meal service. Several district-level staff mentioned freshness as a desirable attribute of the foods that they served. They used “fresh” in the sense of produce that had not been canned or frozen (SFA-VA, SFA-SC, SFA-GA) as well as how foods had been prepared, such as pizza made in-house (SFA-KY, SFA-SC) or items baked off in the school cafeteria (SFA-IA). In every SFA, district leadership made comments about their desire to use “fresh stuff” (SFA-SC), “go fresh” (SFA-FL), or “try to keep it as fresh as possible” (SFA-IA). A staff member at SFA-VA explicitly linked freshness to quality, noting the SFA’s desire to serve “the freshest and best” foods to students. Eight cafeteria managers suggested that freshness, of some variety, is important to what they serve (ES SFA-VA, MS SFA-VA, HS SFA-VA, ES SFA-SC, MS SFA-SC, ES SFA-GA, MS SFA-GA, HS SFA-GA).

District-level staff suggested that providing local foods is connected to maximizing freshness, especially in terms of produce. Describing procurement of local foods, a district leader in SFA-VA said, “Of course we wanted more fresh. And if we could get

more fresh and do it at certain times of the year more economically, that's a win-win for everybody, there are no negatives there." An employee in SFA-IA noted that "fresher" is their goal and local often goes along with that as a "bonus." Four cafeteria managers described local foods as preferable because they are fresher, of better quality, and tastier (ES SFA-VA, MS SFA-VA, Area SFA-IA, HS SFA-FL). Referring to the local corn and drumsticks that they serve, an area manager in SFA-IA said, "[The students] love all that stuff .... I think it just tastes better when it's locally grown."

Only one district-level staff member, in SFA-GA, explicitly said that local foods taste better. Six district-level staff members expressed hesitancy about whether students notice the local foods (2 SFA-GA, 2 SFA-SC, SFA-IA, SFA-VA). "I don't know. I just don't know," responded an employee in SFA-GA when asked if kids care about local foods. A staff member in SFA-SC thought that "some do, some don't." Several cafeteria managers agreed. Six managers, largely from high schools, said that students didn't pay attention to the food's origin (HS SFA-GA, HS SFA-VA, HS SFA-VA, HS SFA-IA, HS SFA-SC, ES SFA-FL). A high school manager in SFA-GA said that even though they try to promote local foods to the students, "I really don't think they care."

Doing more in-house preparation is another way of providing fresher food. All of the SFAs in this study were attempting to do more cooking or preparation of items in their cafeterias, and several SFA staff connected this change to a desire to serve fresher foods (SFA-SC, SFA-FL, SFA-KY, SFA-GA, SFA-IA). In SFA-IA, where many items are made from scratch in the SFA's central kitchen, a district leader described wanting schools to be

able to bake a cinnamon roll from dough made at their central kitchen in order to “get some of those smells, freshness in that school.”

A few meal program employees explicitly expressed that cooking from scratch simply produces better food (SFA-VA, SFA-GA, MS SFA-KY, ES SFA-VA). In SFA-VA, which has continued to do more scratch cooking than other districts, district leader said, “A lot of schools do things a lot more prepackaged, and we're very traditional. I mean, I think it's quality food.” A cafeteria manger in SFA-KY, who had been working in school food long enough to remember when her cafeteria made rolls by hand, reminisced that “the students loved them .... My food was good.” Some district-level staff members also suggested that serving an item fresh could enhance its appeal if unfamiliar. A district-level employee in SFA-FL explained their strategy to ensure success when bringing in a new food, hummus, saying that it might not be familiar to some students, “but we’re making it fresh.”

Other staff thought that students were not likely to see (or taste) the value in scratch-cooked foods. Fewer cafeteria managers than district-level staff noted the value of scratch cooking, although one middle school manager in SFA-VA did express that she feels the scratch cooking that they do is “giving these kids a benefit they might not have gotten,” since most of their parents don’t have time to cook. A district-level employee in SFA-VA, where student participation went down as they put more homemade entrees on the menu, described that they provide scratch-cooked items “to say that we have them” to parents.

Indeed, a major value of providing foods prepared in-house seems to be the associated positive expectations that go along with it – although staff cited these as more relevant for other adults than for students. District-level meal program staff suggested that parents would see scratch-cooked foods as indicative of higher quality. A district leader in SFA-IA explained wanting to advertise their scratch cooking to parents: “So I think one thing we could do here is make more things here ... and market it to parents so they know that it's not just jarred pasta sauce, it's something that we really make.” Similarly, district-level staff in SFA-GA and SFA-SC noted that procuring and highlighting local foods is relevant “more with the parents” (SFA-GA).

#### *Variety and Options*

Four district-level staff members expressed the importance of providing variety in the meals they offer (SFA-IA, SFA-KY, SFA-VA, SFA-VA). They considered adding specials and new items as a way to create positive interest in the meal program. As the Marketing Specialist at SFA-VA put it, “[The menu] can’t just be the same all the time, [the students] get tired of it.” Cafeteria managers in SFA-VA, SFA-GA, and SFA-FL also noted the need to offer variety “to spark their interest” (MS SFA-GA).

A few district-level staff also noted the need to offer students several options on any given day. In SFA-VA the meal program recently introduced self-service produce bars, from which students can choose the fruits and vegetables that they prefer and how much to take. Two SFA-VA district employees emphasized the positive effect of these produce bars on student selection and consumption of fruits and vegetables.

Cafeteria managers in SFA-IA, SFA-SC, and SFA-GA stressed that it's important to provide options for students (Area SFA-IA, HS SFA-IA, ES SFA-SC, ES SFA-GA). An area manager in SFA-IA noted that this is what students have come to expect in terms of their eating experiences outside of school, and that if students don't like the options at school, they will go elsewhere for lunch. Providing options also maximizes the potential for students to find what appeals to them. The manager at an elementary school in SFA-FL said that to increase participation, she has "been giving them another choice," so that there's always something that they like.

#### *Convenience*

Some staff also try to account for the way that students' time constraints affect their meal service experience. A district-level employee in SFA-KY mentioned that "because meal time is social time," they try to provide items that students "can just grab and take, because they'll go stand with their friends and eat in a group." The manager at a high school in SFA-SC also noted that students like foods they can easily take with them. The importance of ease of consumption was also suggested by other district-level staff who noted that they try to serve foods in the form that students will find easiest to eat, such as sliced apples instead of whole, or carrot sticks in a cup instead of a bag that has to be opened (SFA-KY SFA-GA, SFA-FL, SFA-IA). An area manager in SFA-IA and a cafeteria manager in SFA-VA agreed, explaining that peeled oranges and apple wedges are more likely to be eaten than whole fruit.

#### *Staff-Student Interactions*

Six district-level staff in four districts talked about the importance of good customer service as part of the meal experience (2 SFA-GA, 2 SFA-VA, SFA-IA, SFA-FL). A

district leader in SFA-VA opined that the staff should be “taking care of [the student’s] nutritional needs but also giving that smile, giving that extra ‘have a nice day.’” Five cafeteria managers also noted the value of customer service (ES SFA-FL, HS SFA-FL, HS SFA-IA, HS SFA-VA, HS SFA-GA). As a high school manager in SFA-FL said, “It’s very important the way [the cafeteria staff] treat the student.”

Three district-level staff members (SFA-VA, SFA-FL, SFA-GA) noted that customer service is a priority in their training of cafeteria managers and workers because what they currently provide is “not perfect” (SFA-FL). An SFA-VA district employee explained some of the barriers to providing good customer service, especially the pressure to move students through the line quickly. She said, “Because we’re so fast-paced .... When I’ve got to get ten things onto this tray, I don’t have time to say ‘would you like this?’ I’ll just say ‘bread?’” She also noted that many of their workers do not feel comfortable speaking English, and students will be quick to notice and even laugh at their accent or mistakes, making the workers less likely to try to communicate.

## **Personal and Contextual Factors**

The previous section showed the characteristics of the meal service that SFA staff see as important, namely the type of food and its look and taste as well as other facets of how foods are prepared and offered, such as freshness, convenience, variety, and customer service. The next section describes the personal and contextual factors, beyond the characteristics of the meal service itself, that staff members think influence students’ experiences with and expectations of lunch. SFA staff used students’ past experiences with foods, especially their familiarity with certain types, to explain how students would

perceive what's available at school. They also referred to stigma that generally attaches to the NSLP as a factor in students' expectations as well as some aspects of the cafeteria environment.

#### *Previous Food Experiences*

SFA staff stressed that students must be familiar with the types of food available if they are going to select and eat them. 12 district-level staff members, at least one in every SFA, alluded to or specifically mentioned familiarity with the items offered as a factor in how students respond to the meal service (4 SFA-KY, 3 SFA-GA, 2 SFA-IA, SFA-SC, SFA-FL, SFA-VA). Four explicitly said that students don't like to select or eat foods they aren't familiar with (SFA-SC, SFA-IA, SFA-KY, SFA-GA). "It's a familiarity thing," said a district employee in SFA-KY, explaining which items students tend to choose. They "grab what's familiar," explained another in SFA-GA.

Eight cafeteria managers also used familiarity to explain what students choose and end up eating at school (2 Area SFA-IA, Area SFA-VA, HS SFA-VA, HS SFA-IA, MS SFA-FL, MS SFA-SC, ES SFA-FL). For the younger students, they might not eat items as intended because they don't understand how foods are supposed to go together, for example, eating a baked potato with cheese (ES SFA-FL). Managers also invoked the idea of food neophobia, or the fear of trying new foods: the manager at a high school in SFA-VA noted, "[Students are] like everybody else – don't want to try anything new."

Seven district-level staff and two cafeteria managers in five SFAs tied this familiarity explicitly to what students eat in their household (3 SFA-IA, 2 SFA-KY, SFA-SC, SFA-VA, MS SFA-FL, Area SFA-IA). As a district staff member in SFA-SC put it, they won't

eat things at school if they don't "see them at home." A district-level employee at SFA-VA explained the SFA's challenges in introducing a different type of mashed potatoes:

They were so used to that white gloop and although they didn't like it supposedly, and now it's real potatoes .... It's just getting them used to eating real food, that's hard. A lot of them don't eat real food at home, so that shift is difficult.

A few district-level staff used ethnic differences in particular to explain what students will be familiar with from home. In SFA-KY two district-level employees noted that students from some "cultures" are more used to eating chicken nuggets and corn dogs while others might be more accepting of culturally-specific foods like sauerkraut, if they eat those with their family. Two cafeteria managers in SFA-IA also expressed a belief that students would be more likely to eat foods that aligned with their ethnic background.

While they saw students' home food culture as the major driver of students' past food experiences, staff also suggested that students could gain familiarity with items through exposure at school (2 SFA-KY, SFA-IA, SFA-SC, SFA-GA). They felt that if they keep serving items, students will ultimately eat them. District leaders in SFA-SC and SFA-IA noted that over time students will eventually try and become used to eating unfamiliar foods. A district employee in SFA-KY explained serving certain vegetables, saying, "You do some of the stuff to just get it in front of them, get it in front of them, get it in front of them."

A staff member in SFA-GA noted that the issue is getting students to try things, because once they do they will like them. She and three other district-level staff described the importance of doing taste tests and offering samples so students learn



what new foods are and what to expect of them (SFA-GA, SFA-KY, SFA-FL). However, this strategy takes time. A district employee in SFA-IA noted that even in focus groups it might take students “three to four times” trying an item for students to get used to eating it.

### *School Food Stigma*

According to meal program staff, student perceptions of the meal service might also be related to positive or negative stigma about school lunch in general. Some meal program staff recognized that students may have internalized some of the common cultural stereotypes about school lunch (SFA-VA SFA-KY, SFA-GA). A district leader in SFA-GA linked this to recent media attention for school meals:

You know, it's just been everywhere ... just about that stigma around school meals, and it's really, you know, been heightened over the years, and that's the biggest challenge. Kind of almost doesn't matter what we do or say. There's someone out there saying that the food stinks.

Staff attributed to this stigma an impact on student expectations for lunch overall as well as particular items. Five district-level staff in four SFAs (SFA-KY, SFA-VA, SFA-GA, SFA-FL) alluded to students’ negative conceptions of school food, for example, as “crappy” (SFA-KY) and not “real” (SFA-FL), or “the food stinks” (SFA-GA). An area manager in SFA-IA also suggested that they needed to “lessen the stigma of school lunch.” Meal program staff, both at the district-level and in schools, also suggested that beyond the students, parents and other adults in the community often did not know much about the meal program yet held negative beliefs about the health and quality of the foods served (SFA-VA, SFA-KY, SFA-GA, SFA-VA, HS SFA-IA, MS SFA-GA, ES SFA-FL, ES SFA-VA, MS SFA-VA, Area SFA-VA).

A few staff noted that certain foods in particular might develop a reputation that influences students' expectations and thus whether they select them. A district-level employee in SFA-GA noted that for certain products there can be a snowball effect of rejection once a few students express dislike for an item. However, items can also develop positive word of mouth: a HS manager in SFA-IA described that on days with certain menus, students will come to the cafeteria after having heard from their friends what's available.

#### *Cafeteria Environment*

Meal program staff suggested that the physical cafeteria environment may also contribute to students' perceptions of the meal service. Six district-level staff and one elementary manager (3 SFA-VA, SFA-KY, SFA-GA, SFA-FL, ES SFA-SC) stressed the appearance of the lunch line itself – that it should be “clean,” “colorful,” with “variety,” and should “pop.” Staff suggest that providing a nice-looking line will help give students positive expectations of the program.

There is also the potential for negative experiences in the cafeteria. A district-level staff member in SFA-GA described this possibility for students: "You go in one time and ... you see something that's not clean, or ... at some point someone vomits in there, or the trashcan spills over and its gross." Although perhaps infrequent, such instances may be unavoidable and contribute to negative expectations of the meal program.

#### **Influences on Participation, Selection, and Consumption Decisions**

The characteristics of the meal service that staff see as meaningful, along with how they think personal and contextual factors influence students, form staff

perceptions of what the meal program should offer. If they can provide what they think will create a positive experience for students and positive expectations for the meal and certain foods, then students will participate in the program and eat accordingly. In addition to the meal service itself, staff members also cited other elements that they think affect student decisions about whether to participate and what to select and eat. As suggested in Figure 5.2 above, these include cost, the cafeteria environment, and social norms and stigma.

#### *Cost*

Several meal program staff used family income to explain whether students would participate in the meal program. Six district-level staff and two cafeteria managers attributed higher or lower participation rates at a school to the number of students qualifying for free or reduced meals, with the assumption that students who qualify for free or reduced-price meals will be more likely to eat at school (2 SFA-FL, 2 SFA-VA, SFA-GA, SFA-SC, ES SFA-VA, MS SFA-GA). One district staff member in SFA-KY told a story about a student motivated to come to school just to eat. Another in SFA-VA also noted that as the cost of their paid meals goes up, participation goes down. A district employee in SFA-SC mentioned giving tours in schools with lower free and reduced rates to try to get those students connected to the cafeteria, as they often do not buy lunch at school, and staff in SFA-FL and SFA-VA noted that affluent parents are more likely to pack lunches.

A few staff members further suggested that what students select and eat may be connected to whether they qualify for free or reduced-price meals. A district-level SFA-KY

employee described a “pretty high free and reduced school ... where kids were eating everything on their plate.” An elementary school manager in SFA-FL who worked at two schools with very different rates of students qualifying for free or reduced-price meals noted that her students’ consumption varies by school: at the school with more students from higher-income families “they prefer more of the chicken nuggets, pizza, things like that. And here [where more students qualify for free and reduced meals] they pretty much eat everything.”

#### *Cafeteria Environment*

Cafeteria staff did not mention the built environment of the cafeteria as affecting students’ eating behavior, but they did mention cafeteria practices and regulations as having an impact. Three district-level staff suggested that the lunch period is too short, especially given the time it takes students to get to the cafeteria, wait in line, and eat, and given students’ desire to socialize with their friends while they do so (2 SFA-KY, SFA-IA). A SFA-KY district employee described how the combination of a short lunch period, large school, and long line can keep students from even accessing food, let alone eating it. Similarly, a high school manager in SFA-GA noted that more students might choose to eat at school if they had more time and could get through the lunch line.

Cafeteria managers also noted their own role in affecting student selection and consumption, especially among elementary schoolers. Six elementary school cafeteria managers and one high school manager said that they influence students to select and eat certain foods by offering samples and encouraging them as they go through the line (2 ES SFA-IA, ES SFA-KY, ES SFA-VA, ES SFA-GA, ES SFA-FL, HS SFA-SC). An elementary

school manager in SFA-FL explained, “Some kids say, ‘I don’t want to take the fruit or the vegetable,’ but I say you need to try that and then tell me tomorrow. If you don’t like it, I won’t force you but if you don’t try it you don’t know.”

High school and middle school managers saw themselves more commonly enforcing than suggesting.<sup>17</sup> They noted the role of the produce regulations in influencing student selection: managers from SFA-IA, SFA-GA, SFA-VA, SFA-KY, and SFA-FL all said that students take vegetables or fruit because they have to, sometimes only at the prompting of the cafeteria staff (2 Area SFA-IA, HS SFA-IA, ES SFA-FL, MS SFA-KY, HS SFA-GA, HS SFA-VA). District-level staff did not recognize the role of cafeteria workers as often: only district-level staff from SFA-GA and SFA-SC mentioned the influence of workers on student selection and consumption.

#### *Social Norms and Stigma*

Some staff also saw students’ social norms and the desire to fit in as contributing to their reluctance to participate in the meal program. A district-level staff member from SFA-FL noted that it’s not “cool” to go to the cafeteria, making it difficult to get students to participate. Students may also want to avoid the association that school food is only for poor kids. Offering free meals to all students may be an effective way to remove some of this stigma. Following the assumption that if students qualify for free meals they will be more likely to take advantage of them, participation should go up if meals are free. As two district-level staff noted, seeing other students eat at school can encourage participation, so increasing student participation by lowering the cost of meals could

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<sup>17</sup> Regulations introduced as part of the Healthy, Hunger-Free Kids Act (HHFKA) require that students take a serving of fruits or vegetables in order for the school to be reimbursed for serving the meal.

create a virtuous cycle of more students eating at school. In SFA-KY, for example, after making meals free for all students at more schools, they found participation went up as much as 8%. (However, as noted above, lunch lines may already be so long that some students are not able to get a meal in the time allotted for lunch, which could be worsened with higher rates of participation.)

### **Shifting Student Expectations**

Meal program staff mentioned several elements that they considered to affect student perceptions of the meal program as well as whether or not students participate and what they eat if they do. For SFA staff, the type of food and its taste and appearance, as well as what students already think about or expect from those foods, structure much of how students react to the meal. Beyond expectations for the meal service, staff also expressed that student need for the meal as well as how much time they have to eat it will influence whether and what they eat. Cafeteria staff in particular see a role for themselves in encouraging student consumption, especially of certain foods.

In these explanations, there is an underlying sense of predictability – SFA staff believe it's possible for them to get a sense of what students will or will not eat. However, they may not feel they have control over some of the factors they see influencing student behavior. In particular, they cannot control students' family life, either in terms of what students are used to eating or whether they want to take advantage of low-cost meals. However, meal program staff do see some possibility in shifting students' expectations for school meals, especially through the types of foods

they serve and their sensory attributes as well as counteracting negative stigma about school food.

The next section explains two major ways that district-level staff and cafeteria managers try to operationalize their understanding of students' perceptions of school meals. It describes what meal program staff do to respond to and shift what they see as student expectations for the meal service. Staff perspectives on the meal service, as described above, guide how they try to adjust what they provide so that students will have more positive experiences and expectations. Meal program employees attempt to maximize the characteristics they think are important to students through the items they select and, in a limited way, how they serve them. They also try to change factors that they think affect students' interpretations of those foods, namely through marketing efforts.

#### *Selecting and Preparing Items*

District-level SFA staff create a menu for the district, which individual schools then execute. Creating the menu includes choosing the items that will be served and how they will be prepared, whether that entails developing a recipe or choosing the manufacturer to purchase from. Schools may have some discretion over the side dishes they serve, especially which fruits and vegetables they offer. As they put these menus together, SFA staff try to make sure the offerings will appeal to students in terms of taste and appearance as well as familiarity. They also use what they serve to try to decrease the negative stigma associated with school foods by making menus more similar to what (they think) students associate with high-quality food experiences.

A key element of selecting items is figuring out what students like in terms of taste and appearance. As a district-level staff member in SFA-IA described, “The real driving force to changing the menu is that student taste profile.” However, the district staff who pick items for the menu rely first on their own sensory perceptions and standards for food quality to inform their understanding of what will appeal to students. Generally, an initial step in choosing a new product or developing a new recipe is for the SFA menu planners and/or food purchasers to taste and evaluate items. District-level SFA staff often described products that are “delicious” or “look good” – based on their own perception. It is unclear to what extent they think about and would be able to distinguish between how they judge these products and how students might.

District-level staff do get some input directly from students. Four SFAs reported doing some amount of taste-testing to get student feedback on items they were considering adding to their menu. SFA-VA hosts an annual event in which parents and students taste and rate potential new items and recipes. In SFA-FL vendors will bring in new items for students to evaluate in taste-testing events. In SFA-KY the process is more formalized: students who join the Student Nutrition Advisory Council meet regularly for taste-testing over the course of two years, learning how to give detailed feedback on various sensory attributes of items. A district staff member in SFA-KY described how students are supposed to approach evaluating the item: “Does it look appetizing? Does it smell appetizing? Then, from a taste standpoint, they're supposed to tell us what they think about the texture, the taste .... Did they like it? Would they want it on the menu?”



As in other districts, students are usually asked to rate the items on a simple scale (e.g., one to five in terms of liking or thumbs up/thumbs down, depending on the age group).

District-level SFA staff also develop the menu by keeping abreast of food trends. They reported trying to take advantage of positive associations that students have with foods from other contexts by serving dishes that mimic what students are likely eating outside of school. While at one point this may have been casseroles cooked at home, now it is more likely to be Asian spices, curry, and hot sauce. Staff members in SFA-FL, SFA-VA, SFA-KY, and SFA-GA mentioned trying to pay attention to the dishes that popular local restaurant chains provide. Staff in SFA-FL described observing which purveyors in the mall food court had the longest lines and then copying the popular items. They have had success with this technique: an SFA-FL staff member reported, “Our popcorn chicken bowl is so popular because KFC has one.”

In addition to determining the types of food on the menu, SFA staff also decide where they will purchase those items and what they will be like in terms of preparation, processing, sensory attributes, etc. As noted above, staff generally value fresh foods, but what fresh looks like may differ by SFA. In SFA-VA cafeteria workers in each school baked bread and browned their own ground beef for tacos and spaghetti sauce. In SFA-IA and SFA-KY main dishes or their components were made at a central kitchen, and in SFA-FL they used pre-made entrees while providing fresh fruit and vegetable sides.

Many staff members saw local purchasing as an important way to provide more fresh foods. Some suggested that although the products may be higher in quality, students don’t actually care about where the food comes from. Still, most SFAs

highlighted their local food purchases, often to signal the quality of their program, especially to other adults. Local foods also offer opportunities for promotions and educational activities, as described below.

Similar to their attention to food trends, two district-level staff also noted that students may have preconceptions of certain brands, which can help or hurt how students think of the item and the meal program (SFA-GA, SFA-KY). In SFA-KY, a district-level employee explained that students were upset about the introduction of a Wild Mike's branded pizza that had replaced the more esteemed Papa John's. In his words, "You can't fight the brand." A staff member in SFA-GA explained that they try to highlight their use of "the products that you're buying at home, that you trust" to build positive expectations for the quality of the food at school.

In terms of serving food, cafeteria managers especially emphasized their work to make sure foods look good. An elementary school manager in SFA-IA recounted needing to "fix up" the macaroni and cheese that comes from the central kitchen because it "looks like paste sometimes by the time it comes out." At an elementary school in SFA-KY, the manager said that she tells her employees, "Make this sub like you're going to Subway. It's beautiful. It's a work of art, and you'd want to eat it." Comments from other managers underscored this sense that cafeteria managers may have to stress the value of appearance to the workers in their kitchen. The manager of a middle school in SFA-SC suggested that some of her staff do not show as much concern for how foods end up looking: "Some of the staff don't care. They have a feeling, 'It's kids. I don't care.'" In turn, district-level staff in three districts stressed their procedures to make sure cafeteria staff

know how foods should be served, for example, by sending out videos or photos of proper plating and presentation (SFA-IA, SFA-KY, SFA-FL).

### *Marketing*

Staff saw the stigma of school meals as part of the context that influences students' expectations and experiences, and they attempt to lessen it through marketing of the meal program. Staff comments and practices indicated that they think students' expectations for the quality of the meal service could be changed, or at the least, that staff should try to change them. A district-level staff member in SFA-VA summed it up this way:

I'll talk to the kids in the cafeteria and say "What do you think of school meals or school lunch?" and sometimes you hear "It's not good," "It's gross." And I say "What's gross?" and they can't tell me because it's not true. That's how they feel they're supposed to respond because that's how the nation is responding to it, with all the negative publicity that school meals gets in general. But again, one kid at a time – talking to them and getting them to realize, "Hey, it's not so bad."

Staff in each SFA reported doing some work to promote the meals program through tools like parent newsletters, school announcements, digital display boards, and social media. They used these channels to let students and parents know what foods are available and to advertise particular items or changes. SFAs also described doing in-person promotions at wellness fairs and other school events or in school cafeterias. Even taste testing can be used as a marketing opportunity; as an SFA-KY district employee explained, "We want to make sure that it's not just sampling food that the kids are doing, so that you get that education out there which then goes and starts spreading and trying to combat that stigma of crappy school food."

SFAs vary in the strategies they use, how many, and at what grade levels. The leadership in SFA-VA tried to facilitate schools to do one promotional activity with each elementary school grade to generate enthusiasm about certain foods and about the program in general. While these may not translate directly to what students eat, one staff member suggested that it encourages students to try the school lunch. In SFA-FL promotions such as selling food through a food truck and offering raffle prizes were used to encourage students to at least taste the food. They found that as a result, “the [students] that were occasional customers became three to five times per week and the ones that were steady became every day” (SFA-FL). One cafeteria manager in SFA-VA described creating a campaign to promote a new item to her middle schoolers by offering stickers, free samples, and even writing a rap song about it. She was the only manager who reported going to such lengths, though, and most often district-level staff said that they created advertising materials for distribution across schools.

Advertising often promoted locally-sourced products since meal program staff see their local purchasing as a cue for the quality of their programs and something that might enhance students’ expectations. Districts used signs in the cafeteria, in the serving line, on items, and on the menu to indicate local items (see Figure 5.3). In SFA-KY, for example, a district-level staff member made playing cards featuring the farmers the SFA sources products from, which schools distribute and students are encouraged to collect.

Figure 5.3. Poster promoting local foods, SFA-GA



Source: Author

Providing good customer service and getting to know students may be seen as another way to combat negative stigma about the meal program. Staff in SFA-VA noted that students may take a stereotyped view of “lunch ladies” as mean or grumpy, which providing friendly, warm service can counteract. District-level staff in that SFA also encouraged cafeteria managers to do special educational activities in the classroom and after school to get to know students better. Similarly, SFA-GA paid cafeteria workers a bonus to do nutrition education with students, either through classroom lessons or hands-on activities in the kitchen. An underlying motivation is that these positive interactions with cafeteria staff will give students higher expectations for the experience of eating lunch at school. (These education activities were also thought to encourage

students to eat healthy foods at school, as will be discussed in more detail in the next chapter).

## **Implications**

This chapter has described the factors that SFA staff members think contribute to students' expectations of the meal program and will induce certain behaviors from them – specifically the participation and consumption that co-create public value by supporting students' current and future health. Staff, like students, see a range of elements that matter to achieving these desired NSLP outcomes, from the food to students' past experiences to interactions in the cafeteria. Staff practices in implementing the meal program reflect these beliefs about what will be most likely to encourage students to co-create value by eating. Staff activities, influenced by what they see from students, create the program that is offered, representing the provider side of the co-production process.

Staff efforts to encourage certain student behaviors are often constrained by tight budgets, strict program guidelines and reporting requirements, understaffing, limited infrastructure, and other barriers (Rosenthal and Caruso 2018a; Cornish, Askelson, and Golembiewski 2016; Scheck et al. 2012; Urahn et al. 2013). Buying fresh and local foods may be desirable but requires the time, skill, and facilities to prepare them (Rosenthal and Caruso 2018a). Cafeteria workers in understaffed kitchens with long lines may not have time to make sure each sandwich looks appealing or to encourage each student to try a new vegetable. Even some of the large SFAs represented in this sample did not have a district staff member with the time or training to focus on marketing or education initiatives.

Overall, the structures of the NSLP, as laid out in legislation and regulations, do not address the broad range of factors that bear on NSLP implementation. The low reimbursement rate does not account for all of the many activities beyond procuring and serving food that must occur in an SFA if students are actually going to eat, especially healthy foods. The minimal funding for staff training, marketing, and kitchen infrastructure and equipment minimizes SFAs' abilities to do different types of food preparation, enhance staff skills, and promote their programs.<sup>18</sup> Although parts of the HHFKA require more annual training for cafeteria staff and procedures to avoid stigmatization of poorer students, in general the NSLP guidelines focus on compliance with the rules on reimbursement, fair procurement processes, food safety, and nutrient content – few speak to other elements of the program that more directly connect to the student experience.

Instead, the underlying logic of the National School Lunch Act seems to reflect an assumption that if schools simply provide food and students need the meal, they will take advantage of it. While data on NSLP participation does indicate that students who receive meal benefits are much more likely to eat school lunch than those who pay full price (78% versus 35%), this dissertation suggests that other factors beyond cost could affect this decision (Fox and Gearan 2019). Further, it is not clear whether consumption correlates with student family income, so we cannot assume that these students who

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<sup>18</sup> The Reagan administration eliminated funding for kitchen equipment and reduced funding for nutrition education and staff training (Poppendieck 2010). In 2019 the U.S. Department of Agriculture did offer \$30 million of grants to assist schools in purchasing equipment (U.S. Department of Agriculture 2019).

take the meal necessarily eat it. Assumptions that meal cost alone drives participation and consumption elide the multitude of influences on students' eating behavior.

This chapter shows that SFA staff do consider influences beyond family income on whether and what students eat at school. Still, some of the SFA staff beliefs explored above reflect similarly reductionist ideologies when it comes to assumptions about what students want to eat. The perspectives of SFA staff show the effect of hegemonic nutrition discourse in informing how they think about what students eat, especially when staff reduce student eating behavior to particular types of foods. SFA staff comments often imply that students, in the aggregate, have a set relationship to particular types of foods – students do like fruit, they don't like vegetables; they do like collards, they don't like cucumbers; they do like white biscuits, they don't like whole-grain biscuits. The complex relationship of an individual to a food, and the broad set of factors that influence eating behaviors, are flattened to the type of item and a general preference.

This reductionism is moderated by the recognition that the specific sensory attributes of foods, namely their taste and appearance, do matter to students' selection and consumption. However, these attributes are fixed to items in a standardized way – it is the taste of broccoli or the texture of a particular brand of chicken nugget. Relatively few district-level staff mentioned the role of execution and the ever-changing process of how an item turns out in a particular moment. The foods served by the school kitchen, although perhaps manufactured in the same factory or purchased to the same specifications, are not always the same. Yet from a hegemonic nutrition perspective, eating behavior is reduced to the type of food, and the broader context is dismissed.



Factors like how something was cooked that day and the food's ensuing sensory attributes are not used as a way to understand the student's experience of the meal service.

In their sensitivity to family food culture and student ethnic background, SFA staff do attempt to contextualize student eating behavior. At the same time, without appropriate attention to context and particularities, bodies of students may become standardized in the stories that SFA staff tell, their tastes a product of their demographics. From this perspective, certain students will prefer certain foods because of their family culture, and again, the context of the cafeteria and the particular foods served becomes less important. Cafeteria staff may come to see themselves as limited by or in conflict with a student's past food experiences.

The presence of these nutritionist assumptions underlying staff beliefs raises questions about how students will respond to the meals produced under these assumptions. Are students influenced by hegemonic nutrition discourse to the extent that staff are, or do they understand and make food decisions in ways different from what SFA staff see and expect? These questions are particularly salient in the case of healthy foods, which will be explored in the next chapter.

## **Conclusion**

Although informed by legislation, regulations, and other constraints, SFA staff are the ones who ultimately decide what foods are offered at school and what they are like. As staff go through the process of making decisions about implementing the meal program, they are informed by their perspectives of what makes a meal service that

students will want to participate in. They see the food itself as a major element in student judgments of the meal program – the sensory attributes of the foods as well as what type of food it is. They anticipate that students will respond to certain foods based on their past experiences, especially at home, and that students are more likely to eat foods with which they are familiar. Stigma related to the meal program may color students' expectations, making students less likely to participate in the program or choose certain foods. The student's family's financial need, social norms around school food, and the cafeteria environment may also factor into whether and what students eat at school.

As a result of what they see as important and have control over, SFA staff especially try to adjust the types of foods on the menu and how they are marketed in order to shift students' perceptions of the value of the service they offer. District-level staff try to find types of foods that they think students will like, with appealing sensory attributes. They may turn toward less processed, local foods, and scratch cooking in order to provide tasty and fresh foods as well as to dispel negative stigma about the quality of the foods in the meal program. Staff also feel a responsibility to expose students to foods they might not be familiar with and promote school lunch generally, in order to encourage positive expectations of particular items and school meals overall.

The result of these SFA staff activities is the value offering to which students then respond. SFA staff, informed by their understanding of students' behaviors and motivations, try to offer a program that they think will encourage students to co-create value by eating. Some of what seems important to SFA staff in terms of characteristics of the meal program and relevant contextual factors was also suggested by students, such

as taste and freshness of foods. However, we can also begin to see differences in what staff think and what students report. Students may be more concerned with characteristics that staff don't tend to prioritize or haven't accounted for. Thus when SFA staff members produce a meal that meets their own criteria for appeal, students might not see it the same way. Further, even when staff and student desires for the meal align, barriers that staff face in executing the program may mean that students still will not see the meal service's value. Overall, when the service that staff are trying to offer does not have as much potential value for students as staff members think they will find, students may not choose to co-create value by eating it.

The next two chapters explore these themes further. The framework described thus far is also applicable for understanding students' selection and consumption of healthy foods in particular. Chapter Six uses this framework to compare how staff and students perceive healthy foods. We will see where staff members and students may not be aligned on what affects students' expectations for and experiences of healthy foods at school and what ultimately influences their selection and consumption.

## Chapter 6: Comparing Staff and Student Perspectives on Healthy Foods

*“I don’t wanna be healthy if it doesn’t taste good.” (ES-GA)*

### Introduction

This chapter explores differences in staff and student perceptions of the foods that are healthy and the influences on whether students to select and eat these foods. Chapters Four and Five outlined how students and staff see the influences on students’ school eating behaviors in general; now, we will see how those understandings play out specifically related to foods thought of as healthy. Students’ consumption of healthy foods is especially important to achieving the NSLP goal of promoting student health. If students do not decide to eat healthy foods at school, then the program will not be able to deliver on its purpose. Students must be encouraged to create private value by eating the meal so that public value of their health will be achieved. This co-creation of value depends both on what staff offer as well as how students respond to it, so this chapter compares how staff members’ beliefs and activities related to the value offering align with those of students.

To some extent, the fact that a student eats at school at all can be considered to support their health, especially for those who would not receive adequate nutrition outside of school. Given the Healthy, Hunger-Free Kids Act (HHFKA) nutrition regulations, some might argue that anything served at school qualifies as healthy. However, discourse about school food suggests that school food professionals, advocates, and parents feel that students must eat certain components of the meal, namely the fruits and

vegetables, for their health to benefit (both short-term, for disease prevention and long-term, for the development of healthy eating habits). Others might suggest that beyond produce, certain entrees that the cafeteria serves are healthier than others and thus students should be encouraged to select these options.<sup>19</sup>

Because of discrepancies in ways to think about what is healthy, the chapter begins by describing what district-level staff, cafeteria managers, and students think of as healthy foods. Although the policy text offers guidelines in terms of nutrient content, meal components, and produce variety, school food authority (SFA) staff had their own ideas about healthy foods, which reflect as well as expand on these guidelines.<sup>20</sup> In many ways, staff beliefs followed the nutritionist paradigm outlined by the National School Lunch Program (NSLP): staff members saw as healthy certain types of foods, particularly fruits and vegetables, as well as foods with certain nutrient content. However, staff also described qualities of the food beyond those laid out in the regulations as important to health, especially freshness and minimal processing.

Students' ideas about healthy foods reflected a nutritionist culture as well: they also described healthy foods as fruits and vegetables and referred to the value of certain nutrients. Students referred to a greater variety of types of foods as healthy, including protein and water, and they highlighted the importance of balance between food groups

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<sup>19</sup> For example, P. Johnson and colleagues (2015) label salads, sandwiches, soups, and baked potatoes as “healthier options” than hamburgers, chicken nuggets, and pizza.

<sup>20</sup> NSLP regulations require that SFAs meet various nutrient content guidelines in order to be reimbursed for the meals that they serve. Broadly, these regulations limit the levels of fat, sodium, and calories in school meals and set minimum standards for provision of calories, protein, micronutrients, and types of vegetables (U.S. Department of Agriculture 2012).

in a healthy meal. Even more than for SFA staff, how foods were prepared and processed mattered to students: they stressed that healthy foods must be fresh, real, and safe.

After comparing these beliefs about healthfulness, the chapter then uses the framework presented in Chapters Four and Five to describe how SFA staff see students' perceptions of these healthy foods and the influences on those perceptions. Staff often used familiarity, or a lack thereof, to explain whether or not students eat produce and other healthy foods at school. They also described a stigma among students toward healthy eating. A few staff also mentioned sensory attributes and variety as drivers of what and whether students eat, and several cited the need for staff enforcement of rules about selecting produce.

Students, in contrast, cited sensory attributes as the major reason that they choose not to eat produce at school. While staff may think that students do not like or want to eat produce, students themselves reported little stigma toward healthy foods, and, in fact, responded positively to suggestions for more tasty and more varied produce options at school. And while staff believed they serve healthy foods, given the discrepancy in definitions, students did not always see school foods as healthy.

Given the emphasis that policymakers, the public, and staff in the program place on serving healthy foods, it is striking that students do not interpret their lunch this way. The SFA staff in this study saw themselves working hard, within their constraints of time and budget, to provide what they considered to be the healthiest meals that students would eat. Yet students often did not find these meals to be healthy or appealing enough. This chapter shows where the staff vision of the meals that they are serving

(fresh and healthy) does not align with what students experience (poor quality and unappealing). Staff generally interpreted students' unwillingness to consume healthy foods as a result of the students' lack of familiarity with them and ensuing dislike for the taste. Students themselves suggested poor experience of the meal quality as the major barrier.

### **What Do SFA Staff Think Is Healthy?**

This section draws on district-level staff and cafeteria manager responses to interview questions about “healthy foods” in their school meals program or “healthy changes” that the SFA had made over the past five years. These responses indicate the types of foods, qualities of foods, or styles of preparation they consider to be “healthy” within the context of the NSLP. (One major limitation of this form of the question is that respondents were particularly attuned to recent changes, so responses may not include characteristics that they consider healthy but do not think of as having recently changed.)

Overall, in the responses by staff members describing healthy foods, there emerged three main vectors along which food was considered healthy or not:

- type of item (e.g., fruit, vegetable, or “junk”);
- nutrient profile and ingredients (e.g., sodium, whole grains, and additives); and
- preparation and processing (e.g., fresh, frozen, manufactured, put together in the cafeteria, fried, or from scratch).

When explaining foods' healthfulness, individuals might use each of these different rationales at separate times or all together. Some characteristics tended to overlap or were assumed when others were present; for example, manufactured foods might be expected to have additives while those made in the cafeteria would not. Overall, the

responses aligned with the nutritionist paradigm of health and nutrition (see Chapter Two), one that is supported by the way the NSLP defines healthy foods through its regulations. The responses also aligned with many of the goals of School Food Focus (Focus), the organization for which I conducted this research. These SFAs, including some of the district-level staff interviewed, had all been active in Focus's programs to promote healthful, regional, and sustainable procurement, and their comments may reflect the experience of that participation and their knowledge of my connections to the organization.

#### *Type of Food*

District-level SFA staff, when asked to describe how they've changed the food to be healthier or what they consider to be healthy food, most frequently mentioned fruits and vegetables. Staff in every district, and often more than one staff member, mentioned purchasing and serving produce. Comments reflect a similar sentiment to that of a district-level staff member at SFA-FL who said, "We've strived to get a lot of fruits and vegetables in terms of healthy meals." Similarly, cafeteria managers frequently mentioned produce when describing the district's efforts to serve healthy foods or when describing healthy foods in general. 14 of 22 cafeteria managers mentioned produce as part of efforts to serve healthier meals – "of course, all the fruits and vegetables" (MS SFA-KY). This emphasis on produce aligns with the literature on how people view healthy foods: fruits and vegetables are the most frequently described item among both children and adults (Bisogni et al. 2012; Paquette 2005; Croll, Neumark-Sztainer, and Story 2001).



Staff not only highlighted fruits and vegetables as important; they also stressed the type of fruits and vegetables – specifically *fresh*. In almost every instance in which they mentioned produce, district-level staff highlighted efforts to provide fresh items – staff in every SFA, and in four of six SFAs, two staff members, mentioned fresh fruits and vegetables in particular. A district-level staff member from SFA-VA summed it up well saying, “And we are doing more fruits and vegetables, focusing a lot on fresh.” Like SFA staff, cafeteria managers specifically described *fresh* fruits and vegetables when talking about healthy foods: nine specifically mentioned fresh produce.

District-level staff also explicitly contrasted fresh produce with canned or frozen options: “And instead of buying cans with sodium, we're buying more fresh produce which is healthy for our kids,” noted a staff member from SFA-SC. Other staff also offered a nutrient-based rationale as to why fresh produce is healthier than the alternative. A district-level employee in SFA-GA explained that fresher is more nutritious: because foods lose nutrients as soon as they are harvested, it's important to eat them as soon as possible.

Table 6.1. District-level staff members' descriptions of healthy foods

Type of change	Mentioned in SFA (number of times)	Example
Fruits and vegetables	SFA-SC; SFA-IA; SFA-GA (2); SFA-KY; SFA-FL (3); SFA-VA (4)	"And we are doing more fruits and vegetables, focusing a lot on fresh" (SFA-VA)
<i>Fresh fruits and vegetables</i>	<i>SFA-SC; SFA-IA; SFA-GA (2); SFA-KY; SFA-FL; SFA-VA (3)</i>	"Probably five years ago we tripled the amount of produce and we've kept it steady." (SFA-FL)
Nutrients and ingredients	SFA-IA (3); SFA-SC (2); SFA-FL (2); SFA-KY (2); SFA-VA (3); SFA-GA (3)	"I think that they consider it to be healthy foods if it meets the nutrition guidelines set down by the National School Lunch Program." (SFA-IA)
<i>Sodium</i>	<i>SFA-SC; SFA-FL; SFA-VA</i>	
<i>Whole grains</i>	<i>SFA-GA; SFA-FL</i>	
<i>Fat</i>	<i>SFA-SC</i>	
<i>Calories</i>	<i>SFA-GA</i>	
<i>Protein</i>	<i>SFA-GA</i>	
<i>Additives</i>	<i>SFA-IA (2); SFA-KY (2); SFA-VA (2)</i>	"I think we're all moving toward whole food, ... no artificial colors, flavors, all of those statements about getting rid of those artificial ingredients that are in our foods." (SFA-KY)
Scratch/increased preparation in-house	SFA-SC; SFA-IA; SFA-GA; SFA-KY; SFA-VA (2)	"We're focusing on more scratch cooking, so we take a little more control over our ingredients" (SFA-VA) "School food is healthy. The amount of scratch cooking we do is amazing." (SFA-VA)
Less processed	SFA-GA (3); SFA-KY (2); SFA-VA (2)	"We always look for things with minimal processing, the most natural form that we can get it." (SFA-GA) "We were using a chopped and formed product that was very popular but just didn't seem quite the healthiest." (SFA-VA)

*Nutrients and Additives*

Staff also indicated that controlling the nutrients and ingredients is another major element of providing healthy foods. In five of six SFAs district-level staff described healthy changes to improve the nutrient profile of what they served. Lowering sodium levels was mentioned most frequently, in three SFAs, and increasing amounts of whole grains twice. This understanding of healthy foods aligns with the regulations of the NSLP. As a district-level staff member at SFA-IA put it, “I think that [the SFA] consider[s] it to be healthy foods if it meets the nutrition guidelines set down by the National School Lunch Program.”

Cafeteria managers mentioned nutrient profile in describing healthy foods even more than district-level staff, generally in connection with following the federal guidelines. Fifteen of the 24 managers mentioned nutrients in some way as related to healthfulness, most often sodium and whole grains. Nine, at least one from each SFA, described lowering sodium levels, and nine, from five SFAs, described increasing whole grains as changes to make foods healthier. For example, a manager in SFA-SC, when asked about healthy foods, said, “Our meals have to follow specific guidelines as far as sodium, fat, and all that anyway. Our breads we try and use whole grain as much of the time as we can.”

In addition to meeting the nutrient specifications of the guidelines, district-level staff in three SFAs also expressed concern about chemical additives in items, such as preservatives, flavors, and dyes. A district-level employee at SFA-KY described “what the district considers to be healthy” as including “no artificial colors, flavors, all of those statements about getting rid of those artificial ingredients that are in our foods.” While

not a concern in every SFA, in those where it was mentioned two staff members brought it up, marking it as a particularly salient issue in those districts. However, only one cafeteria manager even alluded to this concern, contrasting natural foods with those that are “prepared and who knows what’s in them” (MS SFA-SC).

Table 6.2. Cafeteria managers’ descriptions of healthy foods

Type of change	Mentioned in SFA (number of times)	Example
Fruits and vegetables	SFA-IA (5); SFA-GA (2); SFA-KY; SFA-SC (2); SFA-FL (3); SFA-VA (2)	“Yeah, they're pretty good about keeping us healthy. A lot of fruits and vegetables.” (ES SFA-IA)
<i>Fresh fruits and vegetables</i>	<i>SFA-IA; SFA-GA; SFA-KY; SFA-SC (2); SFA-FL (2); SFA-VA</i>	
Nutrients and ingredients	SFA-IA (3); SFA-GA (2); SFA-KY; SFA-SC (2); SFA-FL (3); SFA-VA (4)	"This is how we want our product. We don't want it fried, we want it baked. We need whole wheat nuggets. Don't use this kind of ingredients in this. It has to meet the nutritional value for our kids." (ES SFA-GA)
<i>Sodium</i>	<i>SFA-IA; SFA-GA; SFA-KY; SFA-SC (2); SFA-FL (2); SFA-VA (2)</i>	
<i>Whole grains</i>	<i>SFA-IA (2); SFA-GA (2); SFA-KY; SFA-FL; SFA-VA (2)</i>	
<i>Sugar</i>	<i>SFA-IA; SFA-VA (2)</i>	
<i>Calories</i>	<i>SFA-IA; SFA-SC</i>	
<i>Fat</i>	<i>SFA-GA; SFA-SC</i>	
<i>Additives</i>	<i>SFA-SC</i>	
Scratch/increased preparation in-house	SFA-GA; SFA-FL; SFA-VA	“We are doing food from scratch, making fresh bread.” (HS-VA)
Less processed	SFA-IA (2); SFA-KY; SFA-SC	“It's healthier. It's not processed.” (ES-KY)

*Food Preparation, Processing, and Provenance*

In five of six SFAs district-level staff described doing more preparation of items in school cafeterias or a central kitchen as a method for providing healthy foods. Staff explained this type of preparation as a way to provide foods with appropriate nutritional content and free of undesirable additives. In the two districts using a central kitchen model, SFA-IA and SFA-KY, staff explained that they can control the sodium and fat levels of the entrees that they make and do not have to rely on changes by a manufacturer. Even if not fully from scratch, in-cafeteria preparation techniques were also seen as a way to control healthfulness of foods. In SFA-VA the cafeteria staff had been mixing sour cream and low-fat yogurt to make their own low-fat sour cream. And in three SFAs district-level staff cited no longer doing any frying in their kitchens as a change to make the program more healthful.

In contrast, only two cafeteria managers, both in SFA-VA, mentioned scratch cooking as contributing to the healthfulness of what they serve. And only two other managers made any reference to the style of preparation influencing the healthfulness of items; for example, one, a production kitchen chef in SFA-FL, described prepping more vegetables in house and putting together sandwiches as part of their efforts to increase healthy options.

As noted in Chapter Five, district-level staff also saw scratch cooking as part of facilitating the provision of fresh foods, especially fresh produce. A staff member in SFA-SC contrasted using "fresh stuff" against "opening boxes," noting that they are trying to teach their staff "how to cook" so that the staff can work with fresh ingredients. Others described scratch cooking in contrast particularly to *processed* foods. A district employee

in SFA-GA described, “doing more of like the scratch cooking” as a method to “[get] away from” processed foods. In SFA-IA all three of these characteristics come together in a district staff member’s description of their rationale that “a fresher product is a healthier product, one that isn’t so processed.”

Four cafeteria managers also described less processed foods as healthier, even if they did not explicitly connect this to scratch cooking or in-house preparation. One area manager from SFA-IA did make a connection between fresh and less processed foods, saying “We want to make [what we serve] as healthy and less processed, if that makes sense.”

But while many staff consider overly processed foods to be unhealthy, some still felt that industrially produced foods could be healthy too. In some cases, staff members described moving to less processed, but still manufactured, foods as a way of making items healthier without necessarily doing scratch cooking. For example, all of the SFAs purchased manufactured poultry items such as chicken patties and nuggets. At least four SFAs have moved to serving a “whole muscle” or “made with whole muscle” item instead of a traditional chopped and formed item. This product is still pre-made but using chicken that has undergone fewer industrial processes; staff in SFA-GA, SFA-VA, and SFA-KY referred to these whole muscle items as healthier. In explaining why they switched to whole muscle items, a district staff member in SFA-VA said, “We were using a chopped and formed product that was very popular but just didn't seem quite the healthiest.”

Similarly, four cafeteria managers explicitly mentioned serving “healthier versions” of the manufactured items kids like (e.g., Pop-Tarts, pizza, and chicken

nuggets). In SFA-GA two managers mentioned explicitly that the SFA gets healthy items by negotiating with manufacturers to produce foods that meet their specifications.

Finally, staff in both the district office and in cafeterias tied local products to health. As suggested above, this could be due to their freshness. An employee in SFA-KY said, “From a nutrition standpoint, I think the less mileage you have to put on a product, the healthier it's going to be when it's fresh.” When asked about changes to make the program healthier, six cafeteria managers talked about farm-to-school or other regional purchasing efforts, such as the SFA-KY manager who defined healthy foods as “farm-to-school items like all the local cabbage.” It is important to note that SFA staff may not see local itself as intrinsically healthier but may be referring to the fact that local purchasing is more likely to be fresh fruits and vegetables, and produce is considered the healthiest part of the meal.

### **What do students think is healthy?**

They talk about it being healthy and it's not healthy at all. One of my friends got [the peanut butter and jelly sandwich], and he was just looking at the back ... and his eyes bulged out because there are, like, 48 grams of sugar. We were looking at him, we were just reading the ingredients, like what is this stuff, half of the stuff we didn't know it, and then we read through the percentages of everything. There was, like, 1 gram of protein. This does not seem healthy at all. It was, like, 500 calories. We were all just in disbelief that day. (MS-GA)

As they described lunches and foods they considered healthy, students showed an understanding of healthy eating similar to that of SFA staff. Like staff, they described types of foods that are healthy, referenced nutrient content, and associated certain types of production and processing with healthy foods. However, students included other characteristics necessary for foods to be healthy, namely their safety and realness. They

also referenced elements of meals more broadly, such as balance and taste, as connected to healthfulness.

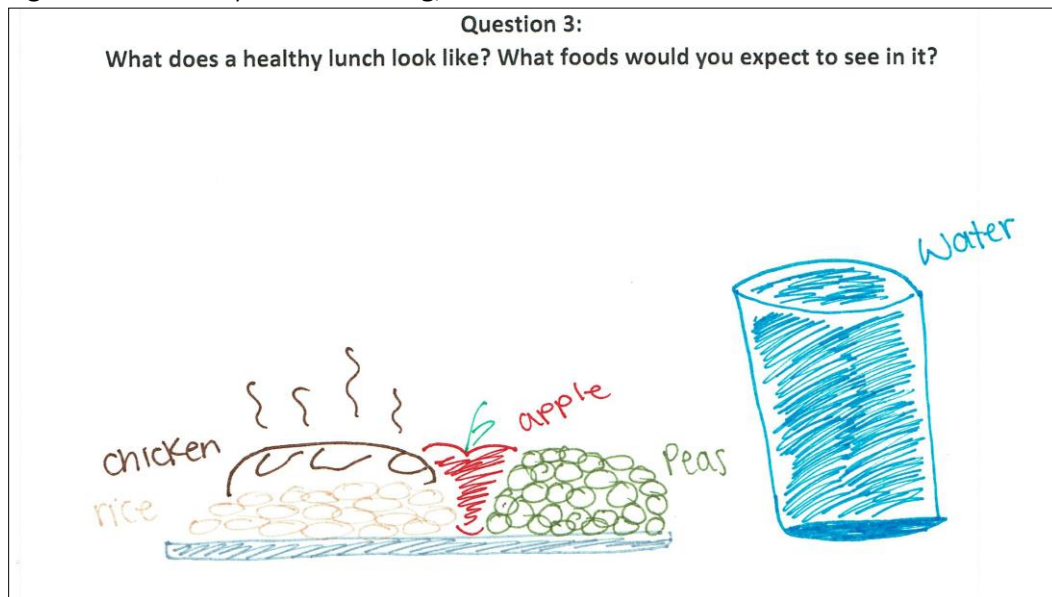
To understand student beliefs about healthy foods, this chapter uses both student drawings and comments made during student group interviews. As part of the student group interview drawing exercise, students responded to the prompt “What does a healthy lunch look like? What foods would you expect to see in it?” The facilitator prompted students to draw whatever foods and beverages they considered healthy, not bounded by what they like or what is served at school. Students then described their drawings in the group conversation.

Students also drew responses to the prompts “What do you usually eat for lunch?” and “What do you like to eat for lunch?” I used these drawings to understand how regularly students are willing to consume fruits and vegetables and whether they see healthy foods as inherently undesirable. Group discussion did not address these questions specifically, but in conversation students frequently talked about the foods they would consider healthy and their opinions about them.



*Type of Food*

Figure 6.1. Healthy lunch drawing, HS-GA



Question three of the drawing exercise asked students “What does a healthy lunch look like? What foods would you expect to see in it?” In response, students most frequently drew fruits and vegetables. Of the 436 identifiable items drawn by 96 students, a little over one-quarter (28%) were fruits, with about another quarter (24%) vegetables. The next most frequently drawn items (11%) were some kind of meat or meat alternative, usually chicken. Grain and dairy items represented about five and seven percent of items in healthy food drawings, with most of the dairy items being milk (5%). However, students more frequently drew water as a healthy beverage (9% of items) and included juice about as often as milk. (See Table 6.3 for details; see Figures 6.1 and 6.2 for sample drawings.)

Table 6.3. Items in student drawings of a healthy lunch

Type of food	Percentage of all items (%)	Number of items drawn
Total identifiable items	–	436
Fruits	28	124
Vegetables	24	103
( <i>Salad</i> )	(9)	(38)
Protein	11	47
( <i>Chicken</i> )	(5)	(20)
Grain	5	23
Dairy	7	30
( <i>Milk</i> )	(5)	(21)
Water	9	38
Juice	4	19
Other	12	52

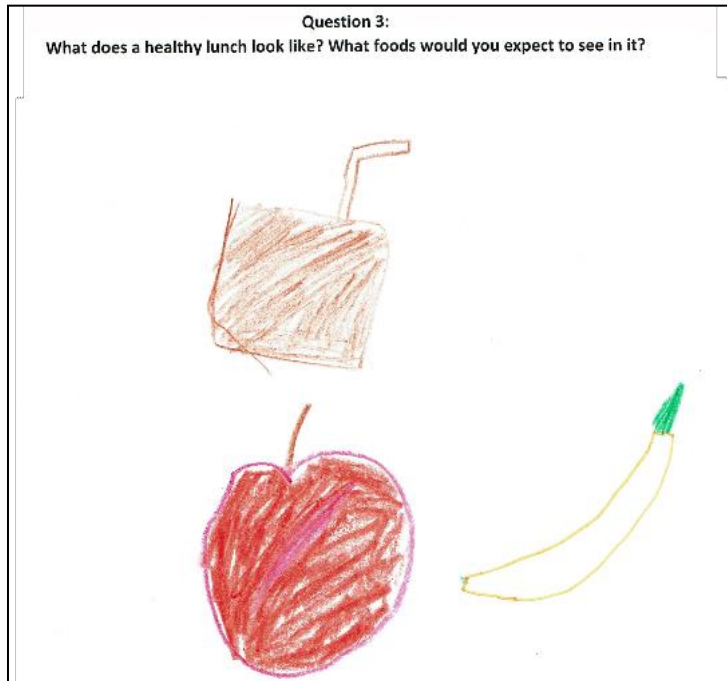
### *Nutrient Content*

Students at times used the nutrient content of items to explain why they are healthy or not. Mostly these were references to protein, with some to fat, calories, and vitamins in general or particular micronutrients. Students justified the health of eggs (MS-IA) and nuts (HS-GA) by noting their protein content, or explained that the cafeteria serves fat-free or low-sugar versions of items like Doritos and ice cream because these are healthier. High schoolers in SFA-KY and SFA-VA and middle schoolers in SFA-FL referenced whole grains as healthy. A middle school group in SFA-GA and a high school group in SFA-SC mentioned salt or sodium as unhealthy.

In a few cases, students connected nutrient content to diet-related disease, specifically diabetes. At a high school in SFA-GA, students explained that the school removed strawberry milk because it was “really sugary” and “America’s freaking out everyone’s getting diabetes.” Notably, no students at any school explicitly mentioned any

other ingredients, such as additives or preservatives, as something to be avoided or that would make a food unhealthy.

Figure 6.2. Healthy lunch drawing, ES-SC



#### *Preparation, Processing, and Provenance*

Students referred to elements of production and processing as part of foods' healthfulness. Like staff, students associated healthfulness with freshness, and students described freshness in a variety of ways. Similar to staff, freshness mattered especially for produce. A high schooler in SFA-SC described the school lunch as healthy because "you always see fresh fruit and fresh salad stuff." Students also applied this notion of freshness to other types of food: middle schoolers from SFA-GA, SFA-VA, and SFA-IA expressed skepticism about the health of foods that came from packages or cans. A middle schooler in SFA-GA explained, "Packaged food has been proven to be not the greatest for your health."

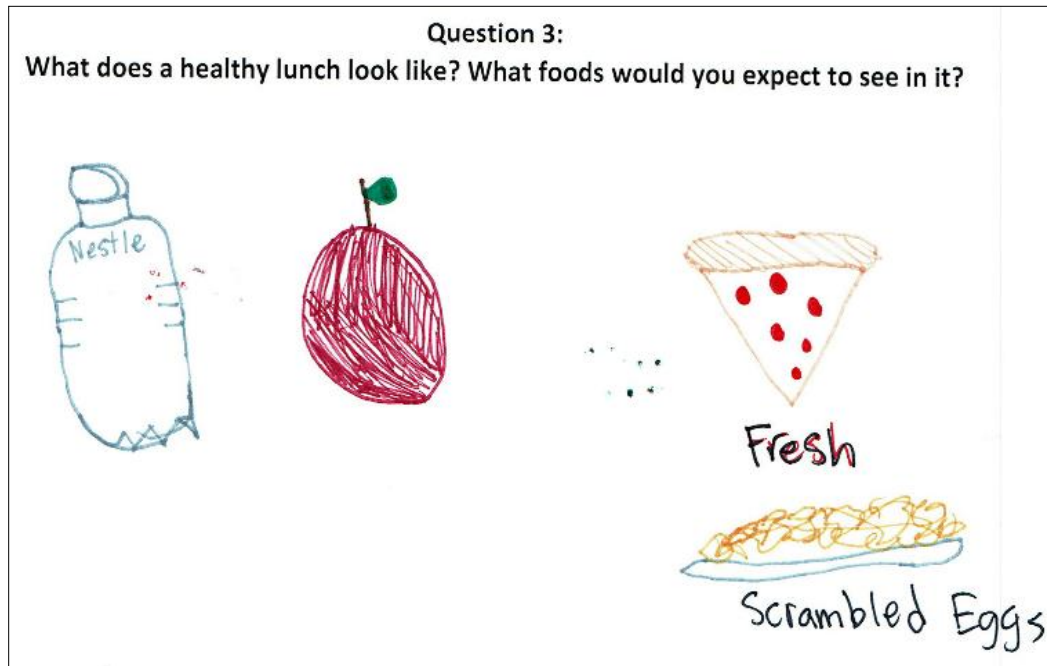
Students' sense of "freshness" also derived from the way they thought foods were prepared. A middle school student from SFA-VA said that mashed potatoes could be a healthy food if they were "fresh mashed potatoes, like, they mash them with real potatoes." A few other students also connected "realness" to the healthfulness of school foods. This criterion for healthfulness related to how foods are prepared as well as how they end up looking and tasting. A high schooler from SFA-FL said, "I just don't think [school lunch] is healthy because, I'm telling you, it doesn't look real." Another student in that group suggested that "if it's real, it tastes better and it's better for you." A middle schooler in SFA-VA said that school food isn't healthy because "it's all either plastic, fake or old as heck."

For students, freshness also depended on the length of time between when foods had been produced and when they were served. A high schooler in SFA-VA stated that healthy foods should be "fresh, period. Fresh. Not in the box waiting a day or two." Similarly, when describing healthy foods, a middle schooler in SFA-VA explained that he had drawn "fresh apples as well as fresh grapes" because the fruit shouldn't be "frozen for a day and then they put it out on the counter for weeks."

Although students generally considered certain types of foods healthy or not, a particular item's characteristics could override this typical designation. An elementary schooler in SFA-SC expressed that, "Just 'cause it's a fruit or a vegetable, doesn't mean it's healthy. 'Cause it can be canned .... Canned food is not healthy." Conversely, the above comment about the need for "real potatoes," as well as three references to fresh or homemade pizza being healthy indicate that even foods that might not typically be

considered healthy could become so depending on how they are made and experienced (see Figure 6.3 for one of these pizza-related references).

Figure 6.3. Healthy lunch drawing, MS-GA



Finally, some students mentioned food safety as an element of healthy meals, using an interpretation of health as the absence of disease or illness. They suggested that healthy foods would be safe for them to eat, without concern about food poisoning. An elementary school student in SFA-GA said, "Some foods ... they're just unhealthy. People, they can throw up a lot." A middle schooler in SFA-GA asked about the milk, "Is that even healthy? I mean, my friend ... said he opened the milk, and it was spoiled." A high school student in SFA-VA cited "properly cooked," that is, not undercooked or raw, as a criterion for healthy foods.

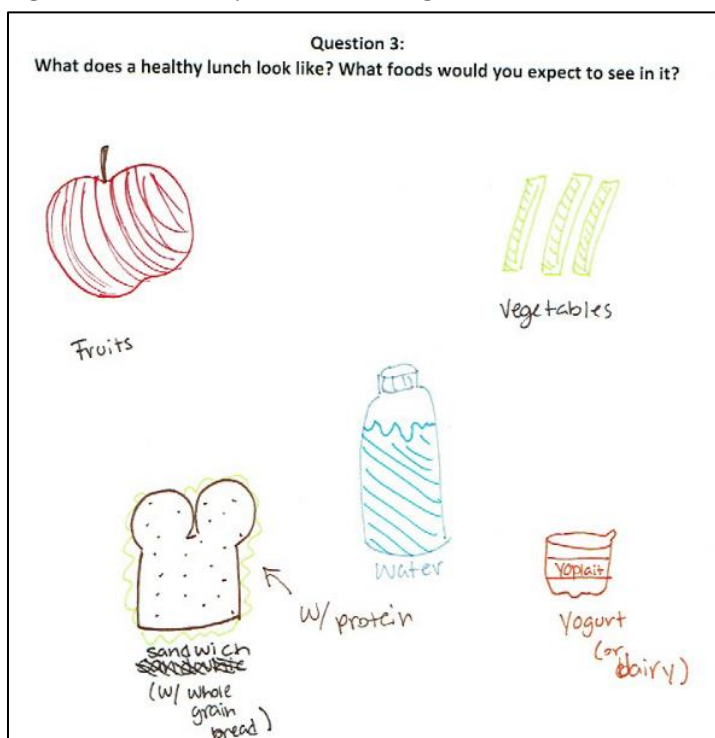
#### *Other Elements of Health*

Although not referred to explicitly as a criterion for health, students frequently brought up taste and liking when they described healthy foods. Listing healthy foods, a

middle schooler in SFA-FL gave examples and then concluded “basic stuff ... that I enjoy.” A student from a middle school in SFA-GA explained that he drew “grapes for fruits and cashews because it tastes good.” When asked how to include potatoes as part of a healthy lunch, an elementary school student in SFA-KY answered, “We could make them into French fries, like with something that makes it good, so they're not that plain.” As noted in Chapter Four, taste is a primary concern for students.

Students also referred to the overall meal, not just the individual food items, as reflecting healthfulness or not. Several drawings and some comments reflected the idea that students are “supposed to have a balanced meal” (MS-IA). 14 students (about 15%) described healthy lunches by referencing a combination of food groups (see Figure 6.4 for a representative drawing). An elementary schooler in SFA-KY explained that a healthy lunch would “have every single [food group] in the plate, like breads, grains, protein, vegetables.” One student from SFA-GA also mentioned the need for variety, as in “different fruit every day.” Two high school students mentioned the circumstances of lunch as important to healthy. A student in SFA-KY thought that they needed more time so that they could eat more slowly, which would be healthier. At a high school in SFA-FL, a student explained that they are not allowed to eat in some classrooms, which becomes a “health issue” because students might not have time to eat before class and then go hungry.

Figure 6.4. Healthy lunch drawing, HS-FL



### *Do Students Think School Food Is Healthy?*

Students portrayed mixed opinions as to whether the food at school is healthy or not. While meals might provide healthy foods like fruits and vegetables, often characteristics of these foods made students skeptical of how healthy they actually were: “the most healthy part of [school lunch] is like the vegetables and fruits and stuff, but some of them just doesn't seem like it” (MS-GA). Food that “doesn’t look real” (HS-FL), “came out of [a] package” (MS SFA-IA), or is “plastic, fake or old” (MS SFA-VA) won’t be considered healthy by some students.

Students at a high school in SFA-SC found their cafeteria food healthy; two students positively noted that the food is “definitely healthy” and “very healthy.” Two students at a middle school in SFA-GA also used “healthy” when asked for three words to describe school food. In other groups students were unsure or disagreed about the

healthfulness of meals. The students at a high school in SFA-FL agreed with each other that there were healthy foods in the school lunch “sometimes” or “at times.” A few student groups were roundly negative about the healthfulness of meals (which may have been in part attributable to a bandwagon effect). Middle schoolers in SFA-IA described their cafeteria food as “sometimes unhealthy, probably most of the time” and “not very healthy,” and in SFA-VA a high school student summed up his group’s feelings saying “To be honest, none of the food is really healthy.”

Only a few students referred to the nutritional regulations for school meals, and they were of mixed opinions about whether these rules ensured that foods at school would be healthy. Talking about the vitamin water in the vending machine, a high schooler in SFA-GA said, “Of course, it's healthy – ‘cause it doesn't have a lot of sugar and the Obama initiative program.” A middle schooler in the same SFA mentioned that “Michelle,” referring to Michelle Obama, had “tried to make [the food] healthier but honestly it just got worse.” Two students recognized that shifting to more whole grains made meals healthier or at least “kinda-ish healthy” (MS -FL). A high schooler in SFA-VA thought that school meals are “pretty healthy. They kind of really changed the whole menu like to whole grain and everything.” But another student in that group was adamant that school food was responsible for making students fat.

Whether or not they thought their school’s food was healthy, students in most groups expected that the food *should* be healthy. Students saw the meal program as trying to provide healthy foods: “That’s the one thing they try to do” (ES-GA), or at the least, “They talk about it being healthy” (MS-GA). See Figure 6.5 for another example.



Figure 6.5. Healthy lunch drawing, MS-VA

**Question 3:**

**What does a healthy lunch look like? What foods would you expect to see in it?**

- More veggies
- BETTER FOOD
- I guess its already 'healthy' (maybe)
- They should make a garden
- Fresh stuff

Students expressed frustration when describing a lack of healthy foods, or disbelief that foods were not healthier, as expressed by the student quoted in the opening to this chapter. A high schooler at SFA-FL reflected a similar surprise regarding her peanut butter and jelly sandwich:

- Student 1: She just told me today that my peanut butter and jelly sandwich is 600 calories. I didn't know that.
- Student 2: [It] is very high in cholesterol. It's 600 calories. It's a lot.
- Student 1: Like a handful of chips is not that much. That's diabetes and cholesterol in a bag.

Overall, students generally referred positively to the idea of healthy foods as part of school lunch and negatively to their absence. As a middle schooler in SFA-VA put it, “I know they're trying to keep us healthy, and I respect that.”

## Comparing Staff and Student Understandings of Healthy Foods

Overall, across SFAs district-level staff shared similar conceptions of healthy foods in the NSLP: fresh fruits and vegetables in particular and, in general, meals that follow the nutrient guidelines and are as “fresh” as possible (which may overlap with local purchasing). Some district-level staff emphasized in-cafeteria preparation of foods to decrease how “processed” they are, while others focused on changing specifications for how items are manufactured.

Cafeteria managers were more likely to explain healthy school meals as following the nutrient guidelines, especially for whole grains and sodium. These foods didn’t necessarily have to be made from scratch. Although a few managers did see less processed foods as healthier, more seemed to accept that manufactured foods made to certain specifications could also qualify as healthy. Fruits and vegetables, preferably fresh and potentially local, were also a major component of healthy meals in the eyes of cafeteria managers.

Students showed an understanding of healthy foods generally in line with that of staff but with some distinctions. Both staff and students most often referred to fruits and vegetables in describing what was healthy. Students also included water, protein, and, to some extent, grains as healthy foods. They also considered balance between food groups as an element of a healthy meal.

We see the dominant force of nutritionism in the NSLP when meal program staff describe healthy foods using nutrient levels. They are reflecting nutritionist thinking that reduces foods to their constituent parts, able to be evaluated based on levels of calories,

fat, whole grains, sodium, etc. Concern about additives especially reflects a nutritionist discourse: certain ingredients are labeled as unhealthy based on scientific determinations and then must be avoided. Each item, and at times each nutrient, is evaluated on its own, without a broader conception of which items may be eaten together and the overall diet (except for questions of meeting daily or weekly levels of nutrient intake).

Following this nutritionist paradigm, few staff mentioned the overall meal composition, conditions of the dining experience, or other eating patterns as relevant to the healthfulness of meals. Only one staff member (SFA-GA) talked about providing balanced meals, which is surprising given the frequency with which individuals usually refer to balance as an element of eating healthfully (Devine et al. 2007; Croll, Neumark-Sztainer, and Story 2001; Povey et al. 1998; Paquette 2005). Two district-level staff did mention “moderation,” pushing back against what they saw as ultimately counterproductive ways of teaching healthy eating through restriction (SFA-KY, SFA-GA).

The emphasis that staff place on fresh foods does show evidence of influences beyond nutritionism, such as cultural discourse about the value of scratch cooking and local foods. However, comments from district-level staff indicate that they largely understand local and scratch-cooked foods as healthier due to higher nutrient content or the ability to monitor nutrient levels – which belies an underlying nutritionist framework. It is not surprising that staff are so attuned to nutrient content due to the stipulations of the HHFKA – these regulations define what can be considered healthy food and structure how the SFA must provide it.

Students' comments also showed the influence of nutritionist discourse, as they used nutrient content to explain certain foods as healthy or not. Often such comments came from older students who would likely have experienced more nutrition education, which would largely reflect a nutritionist paradigm. However, students referred to nutrient content much less often than staff did.

Students were more interested in characteristics of the food product; their desires for fresh and real foods reflect these ideals. Their propensity to move quickly from talking about health to taste reflects the importance they place on sensory attributes in deciding what to eat, reflecting their underlying concern about the food itself. They were not willing to totally separate foods that are healthy from what they would like to eat. The next section further explores what SFA staff think influences students' experiences of and expectations for healthy foods, followed by how students depict their own relationship to healthy foods.

### **Student Expectations and Experiences of Healthy Foods: Staff Perceptions**

In contrast to the variety of opinions offered by students, meal program staff universally described their programs as providing healthy foods to students. Across SFAs district-level staff responses indicated that they see their programs as striving to and succeeding at providing healthy foods. All individuals who were asked about changes to make the program healthier could list steps that their SFA had taken to do so. A district staff member in SFA-FL stated, "We're committed to doing everything as healthy as possible." In SFA-VA, a district employee expressed that food service has always "been about serving the healthiest meals you could." A district leader in SFA-SC noted that they

are “not where I want to be,” but still expressed pride over the local foods and scratch cooking the SFA has incorporated so far. Cafeteria managers in all SFAs also agreed that their meal programs are serving healthy foods and continuing to try to improve. As a middle school manager in SFA-KY said, “We do serve a lot of healthy foods. We just do.” An SFA-IA area manager similarly noted, “We do such a good job of feeding them nutritional food.”

Many meal program staff thought that students respond fairly well to healthy foods. District-level staff in five SFAs noted that students are eating more healthy foods over time (2 SFA-GA, SFA-KY, SFA-SC, SFA-VA, SFA-IA). A district employee in SFA-IA described serving healthy foods to students: “[The students] are experiencing things that they never had before and it did make a difference. You can go now look at those kids in the upper grade levels and they're eating broccoli.” Nine cafeteria managers noted that students generally eat fruits and vegetables (Area SFA-IA, ES SFA-IA, HS SFA-IA, HS SFA-GA, HS SFA-SC, Area SFA-VA, 2 HS SFA-VA, MS SFA-VA) or that most students like them (MS SFA-GA, ES SFA-SC). Another two managers said that students are eating more healthy foods over time (ES SFA-VA, MS SFA-SC).

However, meal program staff still see it as a “challenge” to get students to select and eat these healthier items (SFA-GA). Twelve district-level staff, at least one from each SFA, mentioned some amount of difficulty in getting students to eat healthier foods, especially fruits and vegetables (3 SFA-IA, 3 SFA-GA, 2 SFA-KY, 2 SFA-VA, SFA-SC, SFA-FL). Fourteen cafeteria managers, representing all SFAs, also said that some students might not select or eat healthy foods (2 Area SFA-IA, ES SFA-IA, MS SFA-FL, 2 ES SFA-FL, MS SFA-

KY, MS SFA-GA, HS SFA-SC, MS SFA-SC, 2 HS SFA-VA, MS SFA-VA, ES SFA-VA). As a middle school cafeteria manager in SFA-VA explained about healthy foods, “Sometimes that’s not what the kids want, so we do follow [the guidelines], but sometimes kids aren’t receptive.”

### *Type of Food*

School meal programs depend on student participation, and as noted in the previous chapter, meal program staff see the type of food they serve as a key element of students’ perception of the meal program and ultimate participation. As a district-level staff member in SFA-GA noted, “Ultimately, we’ve got to serve what our customers are going to eat.” Staff expressed a sense of a fundamental tension between the foods that children want to eat and the foods that are healthy. For example, another SFA-GA district employee referred to the “delicate balance” between what she might like to serve (e.g., meatless meals) and “what kids are going to want.” A district staff member in SFA-IA described changes they’ve made toward healthier foods saying they used to provide “what the kids wanted,” that is, sports drinks and full-fat French fries. As an area manager from SFA-IA put it, “We want kids to enjoy the meals that they have at school, but also make them healthier. But it’s that fine line of appealing to them.”

As noted above, several staff members did report that students will select and eat healthy foods. Many saw this selection and consumption as connected to the type of food. Seven cafeteria managers and five district-level SFA staff suggested that student consumption of healthy foods depends on the type of item (2 SFA-VA, SFA-IA, SFA-SC, SFA-FL, Area SFA-IA, HS SFA-VA, MS SFA-GA, MS SFA-SC, MS SFA-FL, ES SFA-FL, ES SFA-

FL). As an Area Manager in SFA-IA put it when asked if students are eating healthy foods, “Some things they do. Some things they don't .... There's things like radishes maybe the kids don't eat.” At least three cafeteria managers and two district-level staff members said that students tend to prefer fruits over vegetables when it comes to produce (MS SFA-GA, HS SFA-VA, ES SFA-VA, SFA-IA, SFA-VA).

### *Sensory Attributes*

Only two district-level staff explicitly mentioned the taste of healthy foods making a difference to students (SFA-GA, SFA-FL). A district employee in SFA-GA suggested that if they season their vegetables and generally make their healthy foods “good and delicious,” once students try them, they will like them. A district-level staff member from SFA-FL stressed that they have to provide dip and dressing, conceivably to improve the taste, to make students want to eat vegetables. A few managers also mentioned other sensory attributes, including student desire for “juicy oranges” (HS SFA-FL) and crunchy lettuce (HS SFA-VA).

Cafeteria staff were most likely to refer to how items look. Six cafeteria managers stressed the importance of the appearance of healthy items (MS SFA-VA, Area SFA-IA, Area SFA-IA, HS SFA-SC, MS SFA-SC, MS SFA-KY). A manager in a middle school in SFA-KY said that students don’t take the “sorry-looking” apples, and one in SFA-SC insisted that students won’t select salads if “they don't have it exactly how it looks nice.” Three district-level staff also mentioned the appearance of healthy items as important (SFA-SC, SFA-VA, SFA-VA).

*Preparation, Processing, and Provenance*

As described in Chapter Five, some staff did indicate a belief that increasing the quality of foods can help increase the appeal of particular items, and in this context, healthy ones. When SFA-GA introduced a whole-grain biscuit, students initially found it “weird.” But over time, as district-level staff “made sure ... that we were putting inside it the best chicken filet we could find, or just anything we put in it was the best that we could find,” the students “came right back” to eating it. Similarly, an elementary school manager in SFA-VA suggested that serving “better” lettuce had encouraged students to select it. An area manager from SFA-IA suggested that students “obviously” like less processed items better.

Freshness, in the form of in-house preparation itself, may be seen by some staff as a way to enhance student experience of the meal service (as noted in Chapter Five). But in SFA-GA it took students some time to get used to eating freshly steamed green beans instead of those from a can. And some SFA staff members were less certain that students necessarily want to eat scratch-cooked foods. Cafeteria managers in elementary schools in SFA-KY and SFA-GA said that some students didn’t like the freshly cooked chicken and pumpkin bars that they had prepared. Similarly, a district-level staff member SFA-VA said that it depends on the item – students like the cafeteria’s lasagna but not the meatloaf.

And as suggested in Chapter Five, while some staff believed that advertising healthy foods as local might make them more appealing to students, most were skeptical about students’ interest in foods’ origin. Specifically for produce, however, a cafeteria manager in SFA-IA and a district-level staff member in SFA-KY thought that knowing foods



are local “piques an interest” or “makes a difference.” In SFA-GA and SFA-SC staff members suggested that when students grow the vegetables or see that they’ve been grown by classmates, they become more interested to try them.

#### *Variety and Options*

Three district-level staff referred to the idea of variety or options as important to students’ experience of healthy foods at school (SFA-KY, SFA-VA, SFA-VA). “Our goal is to have a choice of attractive, appealing fruits and vegetables, so I would hope they would find it reasonable that they would take and if they’re not, we’re not doing our job.” SFA-VA recently began allowing students to self-serve produce, which three of their district-level staff noted had led to increased selection and consumption by students.

More cafeteria managers noted the need for options and variety (ES SFA-FL, ES SFA-GA, MS SFA-GA, ES SFA-SC, Area SFA-VA, HS SFA-VA). An elementary school manager in SFA-FL said, “I feel like we apple the kids to death,” critiquing what she saw as a recent decrease in the diversity of fruits and vegetables available for her to serve. In SFA-GA a middle school manager and an elementary manager were pleased with the variety of produce they were able to serve. The manager of an elementary school in SFA-SC explained that they try to offer at least two options for fruits and vegetables each day so that students can get what they prefer.

#### *Convenience*

Several staff, especially at the district level, referred to the form of items, suggesting that students are more likely to take and actually eat healthy foods that are more convenient (2 SFA-IA, 2 SFA-KY, SFA-GA, SFA-FL, SFA-VA, Area SFA-IA, HS SFA-VA). For example, employees in SFA-KY, SFA-VA, and SFA-IA described that sliced fruit is more

popular than whole fruit and juice is preferred to anything else. Staff in SFA-IA and SFA-GA also described trying to serve carrots in their most convenient form, although they differed as to whether this would be from a bag, a cup, or in some other form.

### *Familiarity and Exposure*

Resonant with the value of familiarity described in Chapter Five, three district-level staff and two cafeteria managers explicitly attributed student likelihood to select or eat healthy foods to their familiarity with them (2 SFA-KY, SFA-IA, Area SFA-IA, HS SFA-IA, MS SFA-FL). This perspective is summed up well by the Interim Director at SFA-IA:

I think as Americans in particular too many kids grow up on going to McDonald's, fast foods .... They don't develop a taste for certain products that are much more healthy for them such as fresh fruits and vegetables. They don't get a variety in their diet, and so when they come to school we are required by regulations to serve certain things and provide certain nutrients to those students. If it doesn't look like something they're familiar with then it's a huge challenge for us to get them to come around.

Staff generally connected familiarity with produce to what students eat at home.

An area manager at SFA-IA explained, “I feel like they're not used to eating a lot of fresh fruits and vegetables at home so then they come here and they're like, ‘What, I don't understand, why do I have to eat this, why do I have to eat raw broccoli?’” A middle school manager in SFA-FL stated that “if [students are] not used to eating fresh fruits and vegetables at home, it makes it harder when we're trying to serve it here.” A district-level employee in SFA-KY related home food culture to where students live, saying, “Depending on what part of town that [a student] may live in, they may be more accustomed to eating something like [a soup] or not.”

However, as described in Chapter Five, staff saw exposure at school as a way to overcome students’ disinclination to take and eat healthy foods. Five district-level staff (2

SFA-KY, SFA-IA, SFA-SC, SFA-GA) noted that while many healthier foods still go into the trash can, students will “adapt” (SFA-GA). They saw this as a product of time. If they serve items regularly, just “getting it in front of them,” as an SFA-KY employee put it, students will eventually come to eat what is served. Staff especially expected this gradual acceptance for changes in nutrient content, such as switching to a whole grain biscuit or decreasing sodium levels. Though there might be complaints initially, eventually students would get used to the changed items.

Six cafeteria managers agreed: they suggested that over time students have been eating more healthy foods, especially produce (Area SFA-IA, MS SFA-FL, HS SFA-IA, MS SFA-SC, MS SFA-VA, HS SFA-VA). They explained this by saying that students just have to “adjust” (MS SFA-FL) and that “as kids continue to see it, they're going to eat it eventually” (MS SFA-FL). AN SFA-IA area manager alluded to not truly understanding how this change occurs: “You try to get them to take it all of a sudden, you look out and they’re eating their apples.”

Chapter Five suggested that cafeteria staff see themselves with a role to play in influencing student behaviors in the cafeteria as students go through the lunch line. This especially applies for healthy foods: cafeteria managers in particular noted the value of their enforcement of nutrition regulations as students take their meals. Nine managers referred to the cafeteria staff role in getting students to take produce, whether through gentle encouragement or more stringent imperatives (2 ES SFA-FL, Area SFA-IA, ES SFA-IA, ES SFA-GA, HS SFA-GA, MS SFA-KY, ES SFA-VA, HS SFA-VA). Four suggested that students learn over time what is expected from them and become used to taking

produce. A few district-level staff also noted the role of cafeteria staff in communicating with students as they go through the line (2 SFA-SC, SFA-GA).

However, while the staff suggested that encouraging selection will lead to increased consumption, a few managers had a different observation. They were unsure of or in disagreement with the idea that students will eat what they've taken, or they suggested that some students just won't eat any vegetables (Area SFA-IA, HS SFA-SC, ES SFA-FL, MS SFA-FL). "There's some students that will grab the apple just 'cause they have to, and walk over to the garbage can and throw it away," said an area manager in SFA-IA. Students are "not going to try it just because you made them take it," explained an elementary school manager in SFA-FL.

But that manager did note that offering samples to students might help convince them that they like unfamiliar foods and make them more likely to select and eat these fruits or vegetables. Managers from an elementary school in SFA-VA and middle and high schools in SFA-SC agreed on the value of exposing students to new foods by conducting taste tests and offering samples, as did four district-level staff members (2 SFA-GA, SFA-FL, SFA-KY). Two cafeteria managers cited the Fresh Fruit and Vegetable Program or similar initiatives to provide students with produce as increasing student awareness of and interest in fruits and vegetables (Area II SFA-IA, ES SFA-VA).<sup>21</sup>

### *Education and Advertising*

Staff see nutrition education as related to the project of exposing students to foods with which they might not be familiar. Several district-level and cafeteria staff

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<sup>21</sup> The Fresh Fruit and Vegetable Program offers free fruit and vegetable snacks to children in elementary schools with high rates of qualification for free and reduced-price meals.

thought that more education about healthy foods would encourage student selection and consumption (2 SFA-GA, SFA-SC, SFA-IA, SFA-FL, MS SFA-SC, HS SFA-SC, ES SFA-FL, HS SFA-VA, ES SFA-IA). A district-level staff member in SFA-KY explained that education is important “because kids don't understand ... why do I have to take a fruit or a vegetable, and this is why it's good for you. This is what it gives you, what protein or what vitamins.” Cafeteria staff in all SFAs participated in initiatives to encourage students to eat healthy foods by highlighting their benefits. This might be through education in the classroom, cafeteria, or garden. For example, staff in SFA-GA posted bulletin boards in the cafeteria featuring the health benefits of a monthly featured item, and they may go into classrooms to teach students short nutrition lessons, which also happened in SFA-VA, SFA-KY, SFA-IA, and SFA-SC.

In addition to giving students more knowledge about which foods are healthy and why that matters, staff suggested that such education may encourage consumption because it helps combat stigma toward healthy items. A few staff suggested that expectations related to healthy types of foods might dissuade students from selecting and eating them at school. Students might see vegetables as “gross” (SFA-KY) or “scary” (SFA-GA). Students might have developed these associations due to their lack of familiarity with healthy foods, but they may also pick those sentiments up from their peers. A few staff members suggested that social norms making healthy foods cool or not might influence students’ selection and consumption (HS SFA-VA, SFA-FL). As the cafeteria manager at a high school in SFA-VA said, students may not want to “to show in front of their friends they like kale.”

Even if they did not explicitly state this sentiment, staff implied that building enthusiasm for healthy foods was important, namely through marketing and advertising. A district-level staff member in SFA-FL noted that making healthy foods seem “special” might encourage students to select them. Other district staff and one manager also suggested that promotions, in-cafeteria displays, and other types of advertising might encourage students to choose and eat healthy foods (SFA-VA, SFA-GA, SFA-KY, MS SFA-VA). While in school cafeterias in all SFAs and at all school levels, we found posters encouraging students to choose certain foods, usually fruits and vegetables or milk (see Figure 6.6 for an example).

Figure 6.6. Cafeteria posters, SFA-KY



Source: Author

And as noted in the previous chapter, despite the skepticism about the influence of local foods on students' behaviors, many SFAs highlighted the local items that they served by putting up signs indicating their commitment to local or posters showcasing the farms that supply them.

### *Summary*

In explaining students' reactions to healthy foods at school, SFA staff members emphasized familiarity and exposure. They suggested that as students see more healthy foods at school (and are required to take them), they will become more likely to eat them, especially fruits and vegetables. Meal program staff also indicated a belief that exposure via taste tests and samples along with nutrition education will encourage students to eat healthy foods at school. A few also mentioned the role of making these foods look and taste good, along with building enthusiasm about them using advertising and marketing.

## **Student Expectations and Experiences of Healthy Foods: Student Perceptions**

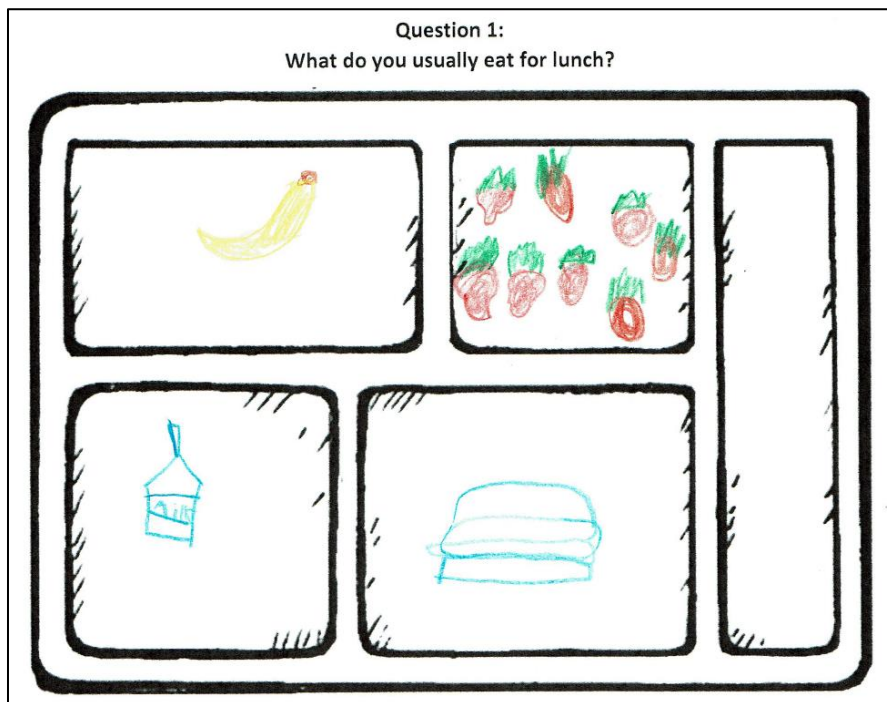
Chapter Four indicated that students' reactions to the food served at school are highly influenced by the food itself and whether it meets students' standards. Similarly, for healthy foods students' perceptions of items' sensory attributes as well as other cues related to food preparation, processing, safety, freshness, and realness affect students' expectations for and experiences for these items – and thus whether they ultimately select and eat them. Several students expressed familiarity with the types of healthy foods served at school and did not describe health and taste as incompatible. While students acknowledged that they and their peers might not always prefer healthy foods

or make decisions based solely on perceived nutritional value, their individual drawings and comments during the group discussions indicated that many do eat and enjoy healthy foods, both in the cafeteria and outside of school.

### *Familiarity*

Student drawings indicated that students are used to seeing and selecting fruits and vegetables as part of the school meal. In reporting what they had eaten for lunch that day or the previous day, only seven students mentioned fruit and five mentioned vegetables. However, in drawings of what they usually eat for lunch, 33 students, almost half, included a fruit, and 22, almost one-third, included a vegetable (see Figure 6.7 for an example).

Figure 6.7. Usual lunch drawing, ES-IA



Accounting for the ten students who included both a fruit and a vegetable, 45 students, close to two-thirds, indicated that at least one fruit or vegetable is part of their regular



lunch. In comparison, about one-third of students drew chicken, the most common protein component in school meals. 40% of students, 29 in total, drew milk, another ubiquitous school lunch item (see Table 6.4 for details).

Table 6.4. Items in student drawings of a usual lunch

	Number of students who included the type of item	Percentage of students who included the type of item (%)	Number of items drawn	Percentage of total identifiable items (%)
Total <sup>a</sup>	72	–	254	–
Fruit	33	46	38	15
Vegetables	22	31	24	9
Water	17	24	17	7
Milk	29	40	29	11
Pizza	11	15	11	4
Chicken	23	32	33	13
Potato	7	10	8	3
Other	50	69	94	37
Unidentifiable	9	13	32	13
Included <i>either</i> a fruit or vegetable	35	49	–	–
Included <i>both</i> a fruit and a vegetable	10	14	–	–
Included <i>no</i> fruit or vegetable	27	35	–	–

<sup>a</sup> Although 96 students participated in the drawing exercise, some groups completed an abbreviated version that did not include this question.

Twenty-seven students, just over one-third, included no fruits or vegetables in their drawing of their regular lunch. Almost all groups included at least one such student; in one middle school and one high school all or almost all students included no produce in their drawings. In discussion, students in six groups did acknowledge that their peers often do not choose healthy foods or won't eat them when forced to take them (HS-FL,

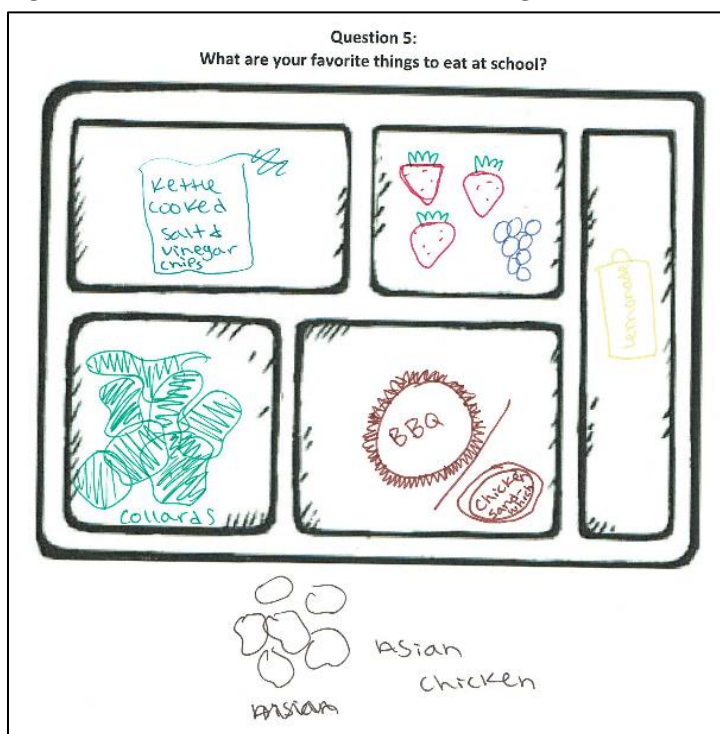
HS-KY, MS- SC, MS- VA, MS-GA, MS-IA). One high schooler in SFA-FL noted that “it’s inevitable” that students are going to “eat unhealthy.” A few alluded to an inherent tension between foods being healthy and tasting good, such as the student who described the school’s peanut butter and jelly sandwich saying, “It’s fat-free. It’s good though” (HS SFA-KY). Although it seems unlikely that the school could serve fat-free peanut butter, this student believed this sandwich to be healthier and was surprised that it still tasted good.

However, few comments indicated any active dislike for or stigma related to healthy foods. Only a few students explicitly expressed personal preferences against vegetables, such as the middle school student in SFA-VA who said, “I don’t eat anything green.” In most cases these comments were directed toward specific items such as collard greens, cucumbers, or “when there’s pickles and carrots in the lettuce” (MS-VA). In two separate discussions, when a student made a comment about not eating vegetables, another student expressed surprise and mild disapproval, as in this exchange:

Student 1:	I don’t eat salad. I don’t eat nothing green.
Student 2:	Really?
Student 1:	I’m just playing.
Student 2:	I was gonna say ...

Many more students referred to healthy foods that they like in general and at school. Question Five asked, “What are your favorite things to eat at school?” Thirty-three students, close to half, included a fruit, and 12, close to 20%, included a vegetable (see Figures 6.8 and 6.9 for examples).

Figure 6.8. Favorite school foods drawing, HS-SC



In comparison, the same number of students included a chicken item as included a fruit, and fewer, 23 students, included milk. The number of drawings with vegetables was comparable to the number showing potato items (13) and nearly as high as that with pizza (15) (see Table 6.5 for details). Again, there was some variation across schools: in four of 13 schools only one student included a fruit or a vegetable in this drawing (MS-VA, HS-VA, MS-SC, ES-IA).

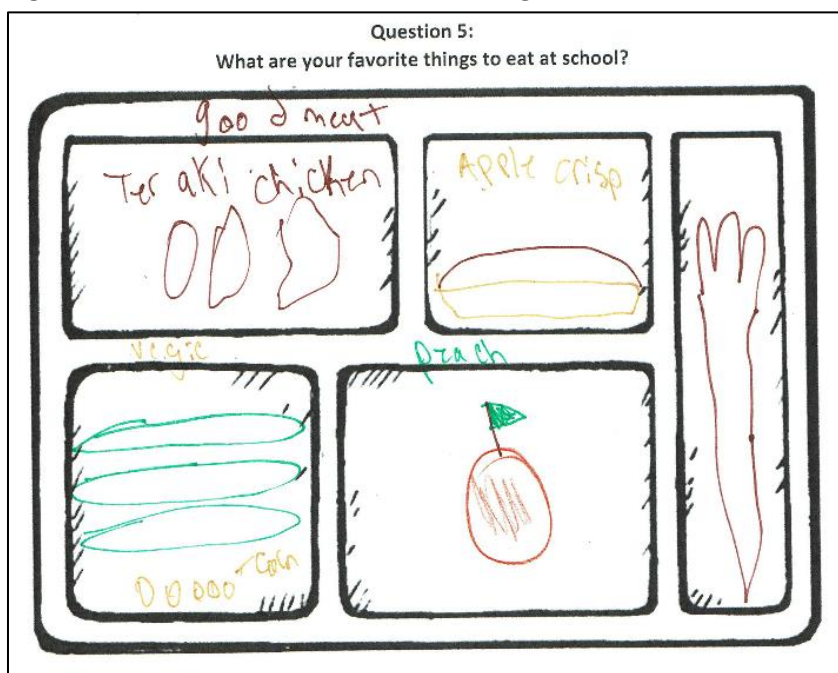
Table 6.5. Items in student drawings of a favorite lunch

	Number of students who included the type of item	Percentage of students who included the type of item (%)	Number of items drawn	Percentage of total identifiable items (%)
Total <sup>a</sup>	72	–	278	–
Fruit	33	46	41	15
Vegetables	12	17	15	5
Water	12	17	12	4
Milk	23	32	23	8
Pizza	15	21	15	5
Chicken	33	46	51	18
Potato	13	18	15	5
Other	55	76	106	38
Unidentifiable	18	25	34	12
Included <i>either</i> a fruit or vegetable	30	42	–	–
Included <i>both</i> a fruit and a vegetable	8	11	–	–
Included <i>no</i> fruit or vegetable	34	47	–	–

<sup>a</sup> As noted in Table 6.4, not all students responded to this question.

Apples and strawberries were the most popular fruits, and students also drew peaches, pears, pineapple, grapes, and kiwi. For preferred vegetables, students most frequently drew corn and salad, with instances of peas and collard greens as well. Students also expressed their liking for fruits, vegetables, and water in group discussion. They noted a range of types of produce that they like in general as well as specifically at school. For foods at school, students mentioned enjoying frozen fruit cups, cinnamon apples, sweet potatoes, strawberries, salads, carrots, green beans, and broccoli, among other items.

Figure 6.9. Favorite school foods drawing, MS-IA



### *Sensory Attributes*

While students did not express dislike of or lack of familiarity with healthy foods, many complained about the versions of these foods they received at school, especially produce. As with school food in general, taste was a major concern. One high schooler's statement "I really do like vegetables. It's just they have to taste good" is indicative of comments across schools and school levels. Several students expressed that they liked a certain food at home or prepared a certain way, but not at school (2 MS-FL, HS-FL, MS-IA, MS-SC, MS-GA, HS-KY). Often students commented on the lack of seasoning or salt on vegetables. "Their green beans have no spices," said one middle schooler, and others commented on broccoli, collard greens, and potatoes lacking flavor.

Students connected their experience with the poor taste of produce to their decisions not to eat them, as summed up by the SFA-GA middle school student who said, "Some of [the school food], or most of it, is really healthy, but people don't like eating it

because it doesn't taste good." When asked why many of their peers throw away the fruits and vegetables they are required to take, one group of high schoolers responded that it is because of "how it tastes."

Students also might not select or want to eat healthy foods because they don't look good. Students described apples and bananas that look rotten (MS-GA, ES-SC) and apples that look suspiciously red (MS-GA). In a high school in SFA-FL a student explained that the lettuce in the wraps, which are "sort of healthy," looks brown and unappealing. She went on to connect this to what a student might choose, saying:

So you're used to the pizza and you already know what it tastes like. So you don't want to waste your lunch and try to get the wrap. It's healthy for you, but it doesn't look good. And it doesn't look like it'll help you.

Students also expressed strong opinions about other sensory attributes of the healthy foods available at school. Students noted that salads might be either too cold or too warm and that fruit cups would often be served frozen (MS-IA, MS-KY, HS-FL, MS-GA), although students in at least one school described the frozen fruit cups favorably.

In ten groups, at least one student commented on the poor texture of produce, whether unripe fruit, watery vegetables or strawberries, dry salads, or soggy or smushed grapes (ES SFA-SC, MS SFA-KY, MS-SFA IA, MS-GA, MS GA-II, HS SFA-VA, HS SFA-SC, HS SFA-FL). Middle schoolers in SFA-GA explicitly noted that because the apples are so mushy and have brown spots, they choose to throw them at each other instead of eat them. While this may in part be a rationalization for bad behavior in the cafeteria, it shows that students see their food as inappropriate for eating based on its characteristics, something implied by students across schools. As one middle schooler in

SFA-VA student put it, “They’re doing a bad job [at helping us eat healthy] because ... if I give this to a 20-year-old or a 30-year-old, even they will reject it.”

#### *Preparation, Processing, and Provenance*

Students connected these sensory attributes to how foods had been prepared or processed. Students from a high school and middle school in SFA-FL disliked the vegetables that they can tell were frozen because they turn out watery or tasting bad. They also expressed concern about how fresh the produce is, describing apples that had been out too long (MS-GA), rotten salad (HS-KY) and “three week old fruit” (MS-VA).

A few students also critiqued the style of preparation of healthy foods. A high schooler in SFA-FL said, “Don't just boil vegetables. Add some salt into it.” Another student in SFA-FL suggested that although they serve whole grains, “They take the health benefits of the whole wheat and then they pair it with something completely unhealthy that outweighs the whole wheat” (MS-FL).

Students did not suggest that they would prefer local produce, or even knowing foods’ origin, of their own accord. However, after the facilitator introduced the idea of local foods, students in six groups thought they would prefer local foods if that ensured the safety, freshness, or taste of what they were offered (MS SFA-GA, MS-GA II, MS SFA-IA, HS SFA-GA, HS SFA-KY, HS SFA-FL).

#### *Variety and Options*

Students indicated familiarity with many types of produce, and in five schools students suggested they’d like to see more varieties at school (ES SFA-KY, MS SFA-IA, MS SFA-VA, MS SFA-FL, HS SFA-GA). As a middle schooler from SFA-VA put it, “They serve carrots almost every day. It's kind of old. Do they think we're rabbits?” Students

suggested a wide variety of other produce they'd like to see in the meal program, including tangerines, pomegranate seeds, asparagus, and kumquats (ES SFA-KY, MS SFA-FL, MS SFA-VA). However, not all students might find these familiar or appealing: at one high school, a student noted skeptically that they have "weird fruit, like yellow [watermelon] and cantaloupe and crap like that" (HS-KY).

Students also commented on the lack of options for healthy foods on a daily basis. Students at an SFA-IA middle school noted that the cafeteria often runs out of salads, and at middle schools in SFA-GA and SFA-VA they run out of the popular fruits. Students at a high school in SFA-VA wanted more items on their salad bar, and when the idea of a "full salad bar" came up at a high school in SFA-FL, students responded with "Oh, that sounds nice" and "I would like that." A middle school student in SFA-IA asked for "egg and toast for food options ... since we need eggs. It's healthy." Her suggestion was met with excitement from her peers, including "That would be awesome ... like, for real." Students with religious dietary restrictions or who identified as vegetarian or vegan in particular noted the need for more produce-based options.

### *Summary*

Students did not report negative attitudes about eating fruits and vegetables in general. Some acknowledged a tension between what is "healthy" and what is "good." But many students seemed to accept fruits and vegetables as a regular part of a school lunch and self-reported eating and enjoying them. Their comments on taste and quality of what is offered at school demonstrate that many have enough familiarity with produce in other contexts to be able to make thoughtful comparisons.



For the students participating in this study, sensory attributes featured prominently in their experience of healthy foods at schools. The poor taste and quality of fruits and vegetables seemed to be major barriers to students eating produce at school. Students reported that they choose not to eat types of produce from school that they eat in other contexts because of the taste, texture, temperature, appearance, preparation, or freshness of school offerings. They also referred to the lack of variety and options as barriers to eating healthfully at school.

Unpleasant experiences eating healthy items at school condition students' expectations for what they will be like the next time. As such, students will not select these items or will not choose to eat them if forced to take them. Concerns about health and the importance of eating healthy foods do not seem to motivate student choice of what to eat at lunch, particularly when presented with other foods that they expect will taste better.

### **Comparing Student and Staff Perceptions**

This chapter has shown that students define healthy foods as staff do, although they may take more characteristics of the food into consideration. All the actors in the NSLP generally agreed that healthy foods are fruits and vegetables as well as foods with appropriate nutrient content and prepared in-house or with "better" methods. Students and staff both valued freshness, especially for produce. And while some students did not include healthy foods as a regular part of their diet, few actively expressed stigma toward healthy foods, and many were excited about the prospect of good-tasting, healthy options at lunch.

Several school-based staff members suggested that over time, students are eating more healthy foods. As staff try to understand why some foods still end up in the trash, they turn to explanations grounded in students' eating experiences outside of school. Some staff members portrayed students as unfamiliar with healthy foods and their value. The time and effort that SFA staff spend on education implies that they think students need better knowledge of what foods are healthy and why to eat them. Such nutrition efforts are likely working, given students' expressions of conventional nutritional understandings. However, this chapter alerts us that while nutrition education is no doubt important in providing information about healthy eating to students and shaping what they think, a lack of knowledge about *what* is healthy is not the only factor that keeps students from selecting and eating healthy foods.

As with education, providing exposure to healthy foods at school through samples, taste tests, and other promotions is likely a key part of forming students' acceptance of these items (Koch et al. 2017; Joshi and Misako Azuma 2008). As initially described in Chapter Four, and further outlined above, in order for students to select and eat healthy foods at school, students must expect that they will enjoy them. As SFA staff suggest, some students may not regularly eat fruits and vegetables at home so when they see a salad or kiwi slices, they might not recognize or anticipate that they will like them. Providing low-risk ways for students to taste and get used to these types of foods can build their familiarity and, ideally, positive expectations for healthy foods.

Other students may be quite used to eating fruits and vegetables but do not like those offered at school, as indicated by the many student comments comparing school

items to what they eat at home.<sup>22</sup> No matter the students' previous experience with healthful eating, it is crucial that they like these foods when they try them at school, whether in a taste test or as part of the cafeteria meal. As noted in an article on obesity prevention efforts, "The preparation and presentation of healthful food options are a vital consideration for any environmental intervention, as motivational and educational messages will be effective only if viable, esthetically and gastronomically pleasing healthful options are available to students" (Gorman et al. 2007, 2526). How foods taste, as well as their temperature and texture, largely shape students' experience of the food. This, in turn, shapes expectations, and as such helps determine whether students expect to enjoy eating, for instance, broccoli at school (and potentially broccoli in general). An item's appearance offers cues as to these traits, so it also influences whether or not a student will select and consume an item.

As noted in Chapter Five and above, staff do see a need to make school foods look and taste good. However, they seldom referred to the quality of the food itself when explaining student reactions to school meals. Few staff members in the study explicitly noted concerns about the taste or other sensory attributes of the healthy foods they provide. When they did express concerns, they most frequently mentioned the form of the item (i.e. sliced versus whole apples) or the appearance. Based on what students report about their perceptions of school foods, there seems to be a need for more

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<sup>22</sup> I did not analyze student comments or drawings based on their family income or cultural background, so it is not clear whether the students who expressed greater familiarity with healthy foods were more likely to come from particular types of home environments. As noted in Chapter 3, the schools in which we conducted interviews largely reflected the average national rate of students qualifying for free and reduced-price meals.

attention to the taste and texture of items. School meal programs must address issues related to quality and preparation of produce so that students will try these foods, like them, and trust that they will consistently taste good. Quality will need to align with students' standards for these foods – for example, apples without bruises or firm grapes.

In cases where staff do recognize the value of fresh produce, they may need to attend more closely to whether students are actually receiving produce that they find to be fresh. Students in only a few schools described their food as fresh. Much more often students complained about a lack of freshness. Although many SFA staff would attest that they do provide fresh foods, it is the student perception that matters when it comes to student consumption and the NSLP achieving its aims: students' experience of the food as fresh is important to both to their considering it as healthy and their consuming it.

A desire for choice and variety also affects how students perceive healthy foods – they may grow tired of certain items, affecting their experience of them. Some staff, especially those based in schools, did refer to the need to include variety and options, especially for produce, in the school menu. This aligns with what students also expressed. Staff may need to pay greater attention to the specific types of produce that students at their school are interested in, in addition to the quality of what they provide.

Similar to past studies, these findings suggest that interventions to improve students' diets will not be successful if focused only on educating students about which foods are healthy and why they should eat them (Contento et al. 2006; Hoelscher et al. 2003; Hawkes et al. 2015; DeCosta et al. 2017). Students will not be likely to choose to

eat fruits and vegetables at school, even knowing that these are healthy foods, unless they also taste good and the students expect them to taste good. More education on the reasons to eat fruits and vegetables must be complimented by efforts to improve palatability of these foods in the cafeteria and to convince students that they will taste good when selected.

It is important to note that doing so can be challenging. Budgets and facilities may make it costly and difficult for SFAs to procure a large variety of high-quality produce and to effectively prepare and hold it in the typical school cafeteria kitchen. Similarly, preparing vegetables to match what students are accustomed to at home or in other contexts may be challenging to do within the strict regulations on fat and sodium in school meals. Increasing funding for school meals as well as providing training for cafeteria staff in produce preparation may help improve foods such that students are more likely to eat them.

Ideally, regular exposure to high-quality, healthy foods would encourage students to eat more as they come to recognize these foods and trust they will be good; however, taken too far, this theory of changing students' consumption takes on a sheen of a belief in the power of certain foods to "enrapture" (Hayes-Conroy 2014). This is the idea that some foods, specifically those that are considered healthy, fresh, and local, should naturally appeal to everyone. While it may be that these foods often do taste better to students, this is not guaranteed, and students still may not select and consume them. While taste matters, students make eating decisions based on more than their senses. As described in Chapter Four, students have many reasons for choosing the foods that they

do, from cultural conditioning to following social norms to innate preferences, and meaningful interventions will look at these factors holistically in order to shift what and how students are eating.

## **Conclusion**

As meal program staff make decisions about the foods to put on the menu, they attempt to reconcile what they see as potentially opposing priorities. They not only want to serve foods that meet the nutritional guidelines, but in these progressive SFAs they also want to make sure the food is healthy according to standards that exceed the written policy, such as limiting additives or providing local produce. At the same time, staff know that it is not enough to serve healthy foods – they also must get students to select and eat these foods for the full value of the program to be realized.

The influence of nutritionism has meant that staff often think about food solely in terms of nutrient content. This approach to understanding food is evident in NSLP policies that use the amount of calories, fat, and sodium as the sole metric of food quality; it also influences how staff members understand what will encourage students to eat healthfully. From a purely nutritionist paradigm, one might anticipate that with the right education, students will acquiesce to eating the foods that they are told are good for them. Clearly, though, other factors influence students' eating behaviors. Familiarity is a major one, and staff members recognize that providing exposure to produce is important to getting students used to eating it. Staff must also account for other influences on student consumption – namely the other qualities of the food and eating experience that students find important. Characteristics of the meal program beyond

nutrient content are not explicitly accounted for in NSLP legislation or regulations, but in order to achieve the outcome of student consumption, SFA staff must account for factors such as the food's sensory attributes and variety. For example, while reducing sodium is important for children's health, doing so without finding other ways to enhance food palatability will not lead to the ultimate outcome of students eating a healthful diet.

This negotiation between what students like and what is healthy can be considered a negotiation between creation of public and private value in the NSLP, moderated by the SFA staff. The general public (citizens and the policymakers who represent them) value children's health, and thus want them to eat healthfully, and they have attempted to design a policy to encourage this. Students themselves value their short-term desires for tasty food. While SFA staff, as implementers of this public program, may be enjoined to produce public value (i.e., future healthy citizens), they also recognize that students, as the integral co-producers of the program, ultimately must receive private value in order to participate – that is, eat. If they do not eat, no public value can be generated at all. While some staff and students may suggest that “healthy” and “tasty” are incompatible, it is only in combining these that both public and private value will be created.

As a district-level employee in SFA-IA said, “We can offer as healthy a product as we possibly can and if it goes out there and the kids aren't going to actually consume it, it didn't do any good.” It is positive that staff recognize the role of students as co-producers, and it would benefit delivery of the program to more deeply examine staff assumptions about how students perceive the meal program and healthy foods in

particular. As meal program staff attempt to influence students' consumption of healthy foods, they must take into account students' actual experience of the meal service and what students have come to expect from school meals. To find value in the meal that is offered and ultimately consume any healthy foods, students must expect an appealing eating experience.

The next chapter continues to compare how staff and students' see students' reactions to the meal experience, beyond healthy foods. It suggests ways that staff members may be able to adjust their activities to better influence students' experiences and expectations of the meal service such that they are encouraged to eat at schools, eat healthy foods, and thus co-create value.



## Chapter 7: Alignment and Misalignment in Staff and Student Perspectives

*“Kids like pizza, but we like good pizza.” (MS-VA)*

### Introduction

This chapter continues to compare the two sides of the co-production process, looking at the alignment (or lack thereof) between school food authority (SFA) staff and student perspectives on the value offering that is the meal program. Aligning what staff and students believe about the meal program is key to the co-production process because ultimately students have control over which items they select and whether they eat them. Clients must see a benefit in the program in order to participate as the providers expect them to. If students want meals that taste good to them, but staff do not offer meals that students expect will meet their standards for taste, then students will be less likely to eat. If the meal program staff offer a service that students do not expect to be positive, they will not take advantage of it. Without clients using the service, the policy does not create any value for the proposed beneficiaries or the broader public. Thus, in order for co-creation of value to take place, the program providers must take into account the factors influencing their clients’ co-productive activities.

In the case of the National School Lunch Program (NSLP) there is some alignment between clients and providers, but there are opportunities for them to better understand and respond to each other. Staff and students recognize many of the same characteristics as important to students’ meal experience. However, staff may not always be able to execute or communicate these characteristics in a way that students

experience positively. In other cases, staff may not prioritize characteristics that are significant to students. Also, staff may also hold beliefs about how personal factors and the cafeteria context influence student experiences that differ from what students indicate. Better aligning staff efforts to execute and communicate certain characteristics of the meal service with what students say they pay attention to could facilitate students eating more and more healthfully at school. It also could make the meal program more efficient in its operations, as staff prioritize what will best help achieve its desired outcomes.

This chapter first considers the characteristics of meal service which present challenges to positive student experiences of and/or expectations for lunch. Then it compares how staff and students understand the personal and contextual factors that influence how students experience the meal service. The final section offers suggestions to better align student and staff ideas of how students see and respond to the meal service.

## **Meal Service Characteristics**

### *Sensory Attributes*

Both staff and students recognize that the taste of foods is a key concern for students. SFA staff also pay attention to how foods look, which is important to students as well, both as a cue for a food's quality and as part of their meal experience. District-level staff are largely concerned with choosing the right items – picking the brand or recipe that they think will taste and look good to students. Fewer staff members, at the district-level or in schools, expressed concern about the overall sensory experience of the

items by students on a daily basis. But as students reported, items may not turn out well, and students may not experience them positively.

In creating menus district-level staff choose types of foods that they expect students will like, and then they find items to purchase or create recipes to provide them. While they may get some student input during this process, much of it is driven by the staff members' palates and their sense of what will look appealing on the lunch line. Staff do not consult students about every item change, and even when students do give input, taste tests are not usually conducted with much rigor. They may include only a few students or may not offer much opportunity for meaningful feedback. Students are often only asked for a simple rating of satisfaction, and they may not be given much context as to what they are being asked and why, meaning they may not take the exercise seriously or fully understand what they are supposed to do.

Further, the isolated context of a taste test may not suitably reflect the reality of the situation in which a student will eat the item (Koster 2009). Even if students generally approve of the taste of an item in the test condition, what a student experiences on a daily basis may differ from what a menu planner samples or what students try during a taste test. On a regular day in the cafeteria the vegetable soup may not turn out like it did when prepared by the test kitchen or a brand representative, as foods often are for tastings. Cafeteria staff may have left out an ingredient or set the oven to the wrong temperature. An item could have sat in between lunch periods and gotten too hard or too thick, too cold or too warm. As a high school student from SFA-SC described it, the quality of the food "kind of depends on the day."

Students suggested that temperature and texture of foods, frequently attributable to cafeteria staff activities, strongly influence their experience of food quality. Staff mentioned concern about temperature and texture much less often than students did, and staff mentioned temperature and texture much less frequently than they mentioned appearance of foods. But without attention to execution, items may not meet students' standards. While staff members may have carefully selected a pizza brand that they think has the best flavor, students may only experience a pizza that is too greasy or too cold.

Similarly, while staff noted that the appearance of the serving line and the items available are important, they may not always be able to make everything look as they might like. Cafeteria staff may not notice whether a film has formed on the mac and cheese or may not have time to keep it looking appealing as hundreds of students come through the line. A sandwich that district-level staff thought looked fine on a plate may not be as attractive when wrapped in plastic in the cafeteria.

Such issues in execution could arise every time an item is served, making students sure that they will not enjoy that item in the future. But even if a student has only a few, or even one, negative experiences of an item, it can shape their expectations. A lack of consistency in how products are prepared may make students reticent to choose them because they cannot trust the quality they will receive. As a result, even something that district-level staff liked and that met with student approval in a taste test may not end up being popular with students.

*Preparation, Processing, and Provenance*

For both staff and students, freshness is important as a sensory attribute itself, and also as a cue for high-quality, healthy foods. Staff and students all expressed a preference for fresh produce, as opposed to canned or frozen options. In deciding how to provide foods, some district-level SFA staff also saw more scratch cooking as a way to make food fresher and more appealing to students. Some staff didn't see this as a characteristic that is important to students, but many students suggested that they see foods prepared in the cafeteria as preferable. They seemed to believe that foods that are fresh in terms of preparation and processing will offer a positive meal experience in terms of sensory attributes. So while students do value freshness, the underlying concern is still for the taste and quality of the food.

Student comments indicated that even if staff see themselves as providing fresh foods, students often do not experience what they are served as fresh. Students in only two schools, high schools in SFA-SC and SFA-VA, described any of the food in their cafeteria as "fresh." In other SFAs, even where staff prepared food, students did not recognize it as freshly prepared. SFA-VA did the most scratch cooking of any SFA in the study, including making their own spaghetti sauce, taco meat, and breads. Yet a student in a middle school group offered a suggestion to the cafeteria staff to "make your own stuff. You guys are the lunch ladies, you're supposed to be making food." Although the food may be made in the cafeteria, it seems that neither the extrinsic cues of the meal service nor the experience of the foods' taste or other sensory attributes aligns with this student's standards for scratch-cooked food.

This lack of recognition becomes an even greater issue in SFAs that use a central kitchen model, where the food is cooked in a central facility and packaged for distribution to each school. District-level staff at SFA-KY and SFA-IA saw their central facilities as a way of providing scratch-cooked food more efficiently – they can pay attention to the taste and nutrient levels of items while maintaining centralized quality and cost control. However, as a district leader in SFA-IA recognized, those outside of the meal program staff may not see these foods as scratch cooking or attribute to them the related positive expectations:

I think it's important for people to know that we make our own marinara sauce. And we make our macaroni and cheese. And I don't know if people understand that we really do do a lot of scratch cooking or homemade cooking. But because it's here [at the central facility], and it's not at their school, then they don't smell it, and see it.

Indeed, students may not see food from a central kitchen any differently from other pre-packaged items. Students in a middle school in SFA-KY vividly described seeing a staff member squeeze taco meat out of a bag – one referred to it as “jail food.” Similarly, middle school students in SFA-IA called it “disgusting ... to see them taking [macaroni and cheese] out of the bag.” These students did not recognize, let alone value, that these foods had been specially prepared at the centralized facility with great attention by staff to what they thought students would enjoy and benefit from. They only saw the end result of food coming from a bag – both viscerally unappealing and a cue that the food had been poorly prepared.

Staff and students also expressed varying perspectives on local foods in the meal service. Staff largely considered provision of local foods as a cue for quality in the program; however, some saw this more as a cue for adults than for students, and some

questioned whether the local foods actually make a difference to the student eating experience. Most of the SFAs did highlight their use of local foods to students, even if staff weren't sure whether students notice or value local foods. And indeed, few students seemed to have noticed that their meal program included local foods (see below, "Repetition, Frequency, Stigma," for more detail).

However, students did express interest in the idea of knowing more about the provenance of their foods as a cue for their quality. They expressed interest in "local" especially if it would mean fresher or safer foods. A high school student in SFA-KY suggested, "I would be more likely to eat it, like you're saying, if it was, straight up, like, 'this is from this area,' ... local food." SFA-IA middle school students used a basic indication of provenance to mean the food will be more "real," i.e., more in line with their standards:

- Student 1: Yeah, our school was just like, "This came from a farm ..." so every now and then we get chicken drumsticks and we'll be like, "I know this came from a good place."
- Student 2: Yeah, on the announcements they'd be like, "And today's lunch is from Barbara's chicken farm." ...
- Student 1: Right. And it'd be like, "Oh, this is some good stuff." And then, everyone gets chicken because they'd be like, "This is real chicken."

Students, especially in elementary and middle school, also suggested that food safety is an important characteristic of how their meals are prepared. Staff members would not disagree: cafeteria staff constantly rotate stock, take food temperatures, and follow cleaning procedures in order to ensure food safety. District-level staff also think about food safety both in central kitchen facilities and in terms of what items they can

prepare in the school kitchen (for example, few SFAs cook raw meat out of concerns about contamination and foodborne illnesses).

However, it is nearly impossible for students to fully confirm or disconfirm whether foods are safe, so they rely on cues such as sanitation and freshness to inform their expectations. As noted in Chapter Four, several students told stories of their own or peers' experiences with what they considered unsafe food. Individual incidents of finding an expired milk or spoiled food can turn into a "living legend" (SFA-GA) that influences students' expectations of the meal program. Even if incidents such as finding a hair in one's food are infrequent, especially compared to the number of times students eat at school, any such incident becomes evidence of the lack of food safety practices. Students also may connect likely unrelated experiences, such as feeling sick after a certain meal, to a particular item or school lunch generally.

A district-level staff member in SFA-KY described an incident in which a student found a moldy applesauce cup and posted a photo to social media. The SFA eventually had to remove all applesauce cups from the program due to the bad publicity they received. But as the staff member explained, clearly frustrated, "we served over four million apple sauce cups last year, the number of bad applesauce cups was ... five point six times ten to the negative six. I did the math." Unfortunately, a single bad applesauce was enough to ruin the entire bunch in the minds of the students.

Meal program staff may find such student reactions frustrating and even uninformed. For example, a middle school student in SFA-KY recounted having eaten a sausage at school that was pink in the middle and then throwing up. This SFA does not



cook their sausages, so while not impossible, it seems unlikely the sausage would have been undercooked. However, the student is not aware of how the sausage is prepared, or of all the safety protocols that the SFA is required to follow to prevent such an outcome. In this student's mind, his throwing up is linked to the cafeteria food, and the incident influences his expectations for the meal service. While staff may feel secure in their attention to food safety regulations, students may not see, let alone trust, these procedures in the same way.

#### *Variety and Options*

Many students eat lunch at school every day of the week for most weeks of the year. Students voiced a desire for greater variety and more options in response to the repetitiveness that they experience. They also wanted more choices to allow for themselves and other students with dietary restrictions to be able to eat at school more easily. While some meal program staff did note the need to offer more options and greater variety, it did not come up as frequently from staff members as from students. And when staff did mention it as a concern, it was more often cafeteria staff, not the district-level staff who have more control over the menu. One of the few district-level staff to mention this unique context for cafeteria meals was a leader in SFA-GA who said, "There's nowhere that we eat every day, every single day, except for your own home."

However, even in her SFA, the meal program was trying to move toward offering fewer items each day to ease cafeteria staff workload. As a result, district-level staff were seeing an increase in cafeteria morale as workers no longer had to prepare the more complicated recipes that fewer students were choosing. A district employee in SFA-KY

described the trade-offs in serving fewer options every day but some of those only once a month:

I still stick with a kind of the Walmart model, with the entrees. Before I got here, we had up to five, and the lines were long, they were crowded, because people didn't need all those options. I reduced the number of offerings daily and increased the number of offerings monthly.

In general, offering more options each day means more work for cafeteria staff, and putting more variety on the menu overall is often more difficult for menu planners and purchasers at the district level. District-level staff who plan menus, as well as cafeteria managers who may make decisions about the number and types of produce sides to offer, must weigh these concerns against the benefits of offering more variety and choice for students.

Students also described the cafeteria running out of food as a common negative experience of the meal service. They seem to have an expectation that if a food is advertised, especially if they've pre-selected it (as is common in some elementary schools), they should get that option at lunch. Many cafeteria staff agreed: several noted that "what the first child gets, the last child could get" (MS-KY). However, it seems that in practice cafeterias may struggle to execute this ideal. Managers, especially those with less experience, may have difficulty anticipating which items students will want and providing enough of the popular items. There are major disincentives to preparing too much, namely the wasted food and money. But students do not consider these constraints, and when they can't get what they want, it seems to them that staff have not managed appropriately or just don't care whether students get what they would prefer. A middle schooler from SFA-VA recounted,

On the menu they had fish sandwich, I was like, can I get a fish sandwich? I swear [the cafeteria worker] said, no more. I was like, but it's on the menu. Then she opened the door thing and I saw a whole tray. I was like, how you gonna deny me my food? I see it.

The worker may have been saving that tray for a later lunch period, but the student simply saw what he wanted and knew that the lunch lady is keeping it from him for reasons he did not understand.

### *Amount*

Students may feel a similar sense of unfairness related to the amount of food that they get. Middle schoolers especially expressed frustration that the meal is not enough to satiate them. A few staff members also noted that students might want more at lunch, especially “in the meat department” (MS-VA). However, meal program staff must follow guidelines for serving sizes of individual meal components as well as calorie content overall. A middle school manager in SFA-VA manager described this situation:

The new communications person was here asking the kids questions, and they were like “We hate that you give chicken nuggets in a scoop because the person next to me gets 10, and I get 9, and I think you should count it like you used to.” So she was trying to explain serving size and muscle meat – when you switch to muscle meat from processed meat, the sizes [of the nuggets] vary, ... your portion size is slightly different .... The kids don’t want to hear “your pieces were probably bigger.” She tried to explain it to them, but they don’t hear it.

Students simply consider this inadequacy of amount as a negative experience of the meal service without understanding why it is so. And most staff members, knowing that they are serving the appropriate amount per the guidelines, may not consider this a characteristic of the meal program that they should pay attention to or explain to students.

### *Staff-Student Interactions*

As noted in Chapter Five, some staff members do prioritize good customer service as an important characteristic of the meal experience. And students, especially in elementary school, did express many positive feelings toward their cafeteria's staff. They especially appreciated when staff had gone out of their way to provide food for them, such as a middle schooler in SFA-IA who described a cafeteria worker preparing a special sandwich for him on the days the meal had pork. Many students also recognized the friendliness in how workers greeted them and learned their names, and students were adamant about the importance of being polite as they went through the lunch line (ES-IA, MS-IA, ES-GA, MS-GA, HS-GA, HS-SC, ES-KY, MS-FL). As one elementary schooler said, "Every time you go through the lunch line, the people here are very kind. They always welcome me, they're always saying hi" (ES-KY).

However, in some cases, interactions between staff and students may be more fraught. Negative interactions can contribute to a sense among students that cafeteria staff are not concerned about the student lunch experience. Some students described the cafeteria staff as "irritated" (MS-IA), "mean" (MS-VA, ES-SC), or "uninterested .... they just won't care" (HS-GA). High school students in SFA-FL described past experiences with lunch shaming, in which they did not have money in their lunch account and so were forced to take a substandard meal:

- |            |  |
|------------|--|
| Student 1: | I didn't know I had no money in my account. And so they're like, "Oh, here." They just gave me, literally, this piece of bread in a bag. And, like, a little carton of milk. |
| Student 2: | Which ... shows that the county doesn't really care what you eat or how you eat. 'Cause, like, you're in   |

elementary school, and you're gonna give a child a loaf of bread and milk?

Another student, at a middle school in SFA-IA, described what she felt as a lack of concern for whether or not she'd get to eat, recounting a time when, "I got in the line right there, there was no more food. And they were like, 'Oh, I'm sorry. You're just going to starve.'" While this retelling is no doubt exaggerated in terms of what the cafeteria employee may have said, the student's perception was that the staff did not mind that they couldn't provide food for her. Students also commented that cafeteria staff might not respond to their requests, showing a lack of concern about whether students get the items they want. A middle schooler in SFA-GA described,

The lunch people that make our food, they won't give us enough time to say what we want. When we say it really fast, they'll put the wrong stuff on our trays, and when we go back to ask, 'cause they put the wrong stuff, they'll get an attitude and tell us to move along.

Such incidents contribute to an overall feeling that the staff do not care about the student experience of the meal.

Cafeteria staff may not notice the potential impact on students of these behaviors, as they may simply see themselves as following NSLP guidelines and their cafeteria or SFA practices. However, as noted in relation to food safety and amount of food, students may not see or understand the rules staff must follow. And even when students understand why the cafeteria staff act in the way they do, it still may influence their experience of the meal. When asked why they are required to take a fruit or vegetable, a middle schooler from SFA-VA said, "They probably think they're trying to help us but we're kids, so we probably end up thinking they're just being mean."

The quality of the food can also contribute to students' sense of a lack of concern for their lunch experience. Although meal program staff may work hard to provide good food and get students to eat it, students may not recognize their labor. Instead, students suggested that the poor quality of the food they receive reflects the effort and care, or lack thereof, that cafeteria staff put into the meals. In SFA-VA a middle school student referred to elementary school mashed potatoes that tasted good but now, "They just don't care as much. 'Cause we're older." A high schooler in that SFA used "careless" as one of his three words to describe school lunch. Students in that group went on to describe the food as "slapped on the tray" by staff who aren't "passionate" about the food. They described the staff as "working there because they need the money," that it's "just a job" to them. But they did not find the staff incapable: they agreed that staff do show care for the teacher experience. One student said, "They will literally go back there and handmake something really good, 'cause I've seen some of the teachers get a meal, the same meal as me, but theirs looks ten times better."

However, several students also mentioned that they know the cafeteria staff are working hard. Elementary schoolers in SFA-GA thought that staff work hard to "do their best" – at least on the foods that tasted good. High school students in SFA-FL laid the blame for their meal experience not on the cafeteria staff but on other adults they assumed responsible for the program. In discussing the poor quality of the food at school, one student in the group said:

"I just don't understand the whole lunch thing. 'Cause I know it's not the lunch ladies' fault. But I don't know whose fault it is .... I assume it's [the school district] .... I really wish that [the district] actually cared about what we eat."

Students, especially high schoolers, acknowledged the constraints that cafeteria workers face. At least one student in every high school group and in four of seven middle school groups noted that cafeteria staff face challenges as they prepare and serve meals, such as the volume of food to prepare, the loudness of the cafeteria, and the number of students to feed. In SFA-KY, one high schooler mentioned the “qualifications” that staff have to follow, and another in SFA-VA noted that staff have to “listen to the county.” A group of elementary school girls in SFA-KY were impressed that the cafeteria workers remained nice even to the boys whom these girls thought were rude.

In trying to account for adults’ behaviors, students turned to economics. The cost of feeding many students came up in six student groups (ES-GA, MS-GA, HS-GA, MS-VA, MS-KY, MS-IA), and students used this as a rationale for the poor food. As a high schooler in SFA-GA put it, “Considering the fact that a lot of this food is free for the school, maybe we don't have the resources to get higher quality food for the entire student body.” While this student described the lack of resources as a given fact, a student at a middle school in SFA-GA described it more as an active choice by those in charge, saying, “If they spent a little bit more it would be a lot healthier, and the payoff would be a lot more, but the thing is they don't want to pay that little bit more.” Such a decision to try to minimize costs is seen as an expression of the lack of care about the student experience.

Students also expressed a sense that those making decisions about the meals must not know how bad the food is and are not even trying to find out or improve it. High school students in SFA-FL and SFA-KY expressed that those who serve the food and “the

people in charge” wouldn’t even eat it. In SFA-VA middle school students agreed the cafeteria staff “make the food and serve it, they don't try it.” In a high school in that SFA, a student said, “The people that make the decisions, they need to [do] what you guys are doing, asking those questions. They need to go to each and every school, and try it.”

These statements express a lack of awareness about the lengths that meal program staff go to in order to provide food they think students will like. Cues from the meal service and students’ experience of the food’s attributes do not transmit the care that staff see themselves putting into providing lunch every day. The relative infrequency of taste testing activities and how few students attend food shows or participate in activities like the SFA-KY Student Nutrition Advisory Council means that some students may never be asked for any kind of feedback on what the cafeteria serves. And even those that give their opinion on a particular item are not typically asked about their meal service experience beyond a single food, so they cannot give feedback about characteristics like the variety of food or customer service.

## Summary

Staff and students see many of the same characteristics as important to the experience of the meal service; however, staff may prioritize them differently from students. For students, sensory attributes matter more than other characteristics. Students also value how foods are prepared and where they come from – if this means they taste better. Staff members might not fully recognize this desire of students for fresh and local foods and may also neglect certain characteristics of the meal service that students see as meaningful, such as amount and variety of foods. Further, even for



characteristics that staff members do recognize as important, they may not always understand how students' experience them on a day-to-day basis. Staff may not recognize that even "good" items might end up tasting poorly due to execution, or that following standard practices for serving may leave students feeling confused and frustrated by what they see as a lack of care.

As a result, students may continue to have poor experiences and expectations of school meals, influencing their participation and consumption behaviors. SFA staff try to intervene to change these behaviors, and they do so based on what they consider to be the influences on students. The next section considers the main personal and contextual factors that staff and students use to explain students reactions to the school meal service, focusing on 1) students' previous food experiences and 2) repetition, frequency, and stigma. It compares staff attempts to enhance student expectations and experiences to what students imply they notice and are influenced by.

## **Personal and Contextual factors**

### *Previous Food Experience*

Staff members often explained students' eating behaviors with regard to how familiar the student is with certain types of foods, usually based on the student's home eating experiences. Meal program staff expected that students would choose foods that are familiar to them, and, conversely, that not recognizing an item or not feeling comfortable with it will keep them from selecting or eating it. Staff seem right to suggest that students are unlikely to choose unfamiliar foods, since students won't be sure that they like them. Students themselves did not describe this mechanism so explicitly;

however, as Chapter Four suggested, students' expectations for particular foods do influence whether they select and eat them. If students do not anticipate that they will like an item given their previous experience with it, they are hesitant to try it. Instead, they select items they trust will meet their standards for food quality.

Staff seemed to believe that over time, as unfamiliar foods are regularly served in the cafeteria, these foods will become familiar enough for students to try (especially the fruits and vegetables that students are required to take). Staff suggested that students may eventually decide to select unfamiliar foods of their own accord, perhaps after having tried a sample in the cafeteria or in an education program.

Given the relationship between students' experiences of the quality of food items and their future expectations, these exposures must be positive eating experiences for students. If a student has a negative experience with an unfamiliar food, they may decide that they dislike that item. And as Chapter Six shows, even students who are familiar with and have a preference for certain types of foods may come to dislike the school variation, such as collard greens without seasoning or whole-grain items that are too dry.

Such a phenomenon can also apply to foods that are considered more child-friendly than the healthy items that staff anticipate will be unfamiliar to students. Almost every student group mentioned the pizza at their school (only elementary schoolers in SFA-FL and SFA-IA did not), and in all of those groups students made negative comments about it. (Three groups included both positive and negative comments.) Students described their school's pizza as "disgusting" and "gross," often finding it too greasy. Students in six groups (ES-GA, ES-SC, MS-GA II, MS-KY, MS-FL, HS-FL) explicitly criticized

the pizza as fake or not real in some way, like the middle student in SFA-FL who said “the cheese doesn’t taste real,” or the middle schooler in SFA-KY who said it “doesn’t taste like real pizza.” Students seem to have clear, and high, standards for what pizza should be like. They described in detail the way that pizza cheese should stretch or what it should look like if properly melted. As a middle schooler in SFA-VA succinctly put it, “Kids like pizza, but we like good pizza.”

In this case, serving a familiar food might encourage students to select it, but it doesn’t mean they enjoy it or look forward to eating it. High school students in SFA-FL suggested, “It’s not necessarily that pizza is great or anything like that. It’s just kind of, you know, it’s there.” Staff might assume that students like the school pizza because they select it. However, these reactions from students suggest that perhaps serving such familiar foods might create its own challenge. Especially for a food like pizza, for which many students seem to have clear standards, it can be difficult for staff to provide what students expect within the constraints of the NSLP. Students in several groups compared their school pizza to preferred brands like Domino’s or Little Caesar’s. Will a school cafeteria be able to meet students’ standard for pizza using low-fat, low-sodium cheese and a whole-grain crust, as the NSLP guidelines demand? It may be impossible, and the poor quality of the pizza may further contribute to students’ low expectations of the meal program.

In a MS in SFA-GA one student explained that “students don’t like the pizza normally, but they still get it .... But if they have another option, they would probably get something else.” Perhaps if the meal program could offer items that students do not

have such stringent expectations for, and are easier for the staff to prepare to look and taste good to students, students would choose those instead of picking pizza as a default.

Ultimately, students select and eat foods that they expect they will enjoy. This requires a baseline familiarity with the item, which could come from exposure at home or at school. The quality of the exposure at school matters – while students might be more likely to select an item they are familiar with, they won't have a positive experience unless it aligns with their standards for sensory attributes. Even if familiar, foods still need to look and taste good to students, and this may be particularly difficult for some types of items.

#### *Repetition, Frequency, and Stigma*

SFA staff suggested that underlying stigma related to school food influences students' expectations for the meal service at their school. As a result, meal program staff make efforts to try to change negative attitudes, trying to generate enthusiasm about the program through promotions, signage, and activities. This project did not attempt to evaluate the effects of such promotional activities; however, comments from students suggested what they might notice or respond to.

Often these promotions highlighted the local purchasing that SFAs do, since staff see this as a cue for the quality of the meal service. However, when asked about the presence of local foods in their cafeteria, students at five schools expressed that they did not know where any of the cafeteria's food comes from (2 MS-GA, HS-GA, ES-SC, HS-KY). A high schooler in SFA-GA said, "You would honestly never know if [the foods] were local. They really never talked about it." Another high schooler, in SFA-KY, said, "We don't know

where anything comes from.” The SFAs in which these students eat all had robust local purchasing programs which included advertising campaigns – but it seems these may not translate to student knowledge of where foods are from. (This project did not collect data to verify the extent to which the students interviewed had in fact been exposed to SFA marketing efforts.)

Students may also be unaware of other types of meal program promotions. A high school student in SFA-VA noted that even when there have been specials in the cafeteria, it’s difficult to find out about them: “Like if it was said on the intercom or something, like, ‘Oh, try today’s special,’ then I would probably know. But if you go to the lunch line, they won’t offer it to you, you won’t know about it.” Students may not learn about special items or initiatives or may not process or retain that information when it comes time to make lunch decisions.

In some schools, students did seem to have noticed SFA advertising or promotions. A high school student in SFA-SC described that “when they have fresh fruits and vegetables, like when they have the broccoli salad or whatever, they’ll have a little sign above it that says [SC-grown].” A middle schooler from SFA-GA referred to a poster he had read in the cafeteria that said its chicken came from Tyson. And an elementary school student in SFA-IA remembered a promotional event led by a district employee. She asked if others remembered “when that chef man came,” and another chimed in, “Oh, yeah! ... He made this really cool watermelon thingy.”

However, even when students do take note of SFA marketing, they may not trust it. A student from a middle school in SFA-KY recalled that the cafeteria had once

advertised a “local barbecue chicken,” and another student added, “The sign said ‘local.’ It’s not local.” Similarly, a middle schooler at SFA-FL skeptically described cafeteria advertising: “‘Oh, we have very good food. Look at this wonderful healthy food.’ But it’s not.” If students’ experience belies the promises of the cafeteria’s marketing, they might not trust it to inform their expectations for the school meal. Instead of forming expectations based on advertising, as the staff might expect, students rely on their own previous experience with the meal service.

The fact that students return to the cafeteria every day increases the possibility of negative experiences and for negative expectations about meals to build up. As a district-level employee in SFA-GA described: “If it were a new group of people every day, coming in with fresh perspective ... but they’ve been in this school for years. Yes, they’ve heard all kind of stories, and probably had at some point a negative experience.” As described in Chapter Five, meal program staff recognized that school lunch may be unfairly stigmatized as “gross” or “crappy.” Students’ propensity to describe meals as bad and lunch ladies as mean may in part come from stereotypes about school food. However, student comments also suggested that not only cultural discourse but years of experience in the meal program contribute to negative stigma about school food. A high schooler in SFA-KY said, “It might just be that we’ve grown up thinking that it’s bad, by the way it’s presented. Because it’s been presented to us the same way our whole lives, we just already have a predetermined thought it’s gonna be bad.” Students across schools and levels were quick to give their opinions on the quality of the food – it is an area in which they seemed to feel expert and have nuanced opinions. These opinions

made clear that many did not expect to regularly receive food they wanted to eat. These expectations in turn become a barrier to their having a positive experience of the meal service.

## Summary

SFA staff try to serve foods that students like and to generate enthusiasm about them to combat perceived stigma and lack of familiarity. Students will respond better to foods they trust and recognize; however, they must also trust and recognize the version they are presented with at school. While students did notice some of the advertising and promotions executed by the SFA, these will likely not be enough to dispel the residue of negative experiences in the school cafeteria. More positive experiences of the meal service will be necessary to change student expectations about what school food is like.

## Composite Narrative #4 – How It Could Be

*Ms. Nancy looks at the clock. Five full minutes until the bell rings, and everything is ready. She stirs the rice to make sure it doesn't dry out on the top. Mrs. Maria gives her a thumbs-up from the new salad and sandwich bar as she straightens out the cups of carrots and wipes away a small spill of dressing. Mr. Gary stands by, ready to cut open baked potatoes as the students request them.*

*The seventh graders enter the cafeteria and space themselves out between the lines. Lizzy loves baked potatoes, so she's excited about lunch today. The lines moves a little more calmly with fewer students in it, and since the lunch period is ten minutes longer this year, nobody is quite so crazy about getting to the tables as fast as possible. "I'd like a baked potato with cheese," she tells Mr. Gary. He hands it to her, and Lizzy looks at the produce options. She doesn't recognize the white sticks. "It's jicama – give it a try," says the cashier and points to some sample cups. Lizzy grabs a sample and some grapes. "Tell Mr. Ellison what you think," the cashier suggests.*

*Lizzy remembers that she's supposed to eat lunch with some guy from some office today. She finds the table, and Mr. Ellison asks them all what they think about school lunch. "Like, this lunch?" someone asks. "Sure, today's lunch – I'm curious what you all think of the jicama sticks – or just in general." Lizzy isn't sure if she likes the jicama (it's nice and crunchy, but a little bitter), but she tells Mr. Ellison that she loves the baked potato – "just like my mom makes for me." They talk about the food in the cafeteria and the new longer lunch period and how dirty the cafeteria can get sometimes, which Lizzy definitely agrees with. It's fun, and at the end Lizzy agrees to do it again in a few months. She likes getting to say what she thinks – and maybe it will mean more baked potatoes and a cleaner cafeteria!*

*Mr. Ellison is also pleased. He and the other district staff are doing these focus groups in target schools, and they've turned up a lot of useful information. So much of what upsets the kids is easy to fix, or he just has to let the students know more about what the staff already offer. It's amazing what a little communication can do!*

## **Finding Alignment**

Given the areas of overlap and the points of difference described thus far, what should school meal programs look like so that students are more likely to expect a positive experience and thus choose to participate in the NSLP, select certain foods, and eat them? This section offers suggestions, related to food quality, feedback, and time, that could help SFA staff to elicit the student behaviors they would like – and that will ultimately create public and private value in the meals program.

### *Food Quality*

Students suggested that if the foods served at school were more appealing, they and their peers would be more likely to eat them. However, currently students regularly have poor experiences with the quality of food at school, which leads to negative expectations. As a result, even when schools offer new foods that they think will better



appeal to students, students' overall expectations of school food are low, making them less likely to trust that new items will be good and to try them. To break this loop of bad experiences and low expectations, changing the sensory attributes of the food is crucial. Meal program staff recognized the need to use advertising to change students' expectations; however, changing the experience of school food will also be necessary to get students to change their behavior. As noted above, unless accompanied by positive experiences of the school food, students may come to distrust school messaging.

How can SFA staff encourage positive experiences of school foods for students? Currently, they try to do so by providing foods that are familiar and that they think are of good quality. Each of these is important as a baseline – students indicated that they are more likely to select and eat foods they trust they will like, thus familiarity matters. And the underlying quality of items that SFAs purchase or prepare will affect foods' sensory attributes.

Staff should also attend to aligning the sensory experience of school foods with student standards. This might have to do with how items are executed in the cafeteria, particularly achieving appropriate textures and temperatures. SFA staff may also have to find creative ways to align the taste of foods to student standards within the constraints of the nutrition guidelines. For example, students have standards for flavor: they regularly asked for stronger seasoning, especially on produce. Several staff noted that the restrictions on sodium in school meals means they cannot provide food that will taste flavorful to the contemporary student palate, which is used to highly salted foods. However, some schools have found success with herb blends or other non-sodium

seasoning that adds flavor to items. Offering more daily options could also be a way to make sure each student can trust there will be something that aligns with their dietary restrictions and/or personal palate.

In addition, staff could try to enhance the characteristics that they and students jointly recognize as important to students' meal service experience. Staff and students clearly agree on the value of freshness, especially in terms of how produce has been processed. Students' desire for "realness" is also mirrored by staff members' concerns about "quality." As noted in Chapter Four, students often expressed a desire for "real" food, which seemed to be food that aligned with their standards for sensory attributes and preparation of items. While staff did not use this language of "real" or "fake" food, they often referred to food quality, suggesting certain items were "high-quality" or "better" depending on how they were prepared. Staff and students seemed aligned on what "real" or "high-quality" food might be: more in-house preparation and fewer pre-made foods, more freshness and less processing.

Still, even for foods made in-house, the sensory experience of the food is still students' ultimate concern. Students value fresh and freshly prepared foods as cues for positive sensory attributes, especially taste. Even if foods are fresh or freshly prepared, staff need to attend to how students actually experience them. Serving a fresh apple will not offer a positive experience for the student if it is mushy, nor will serving made-to-order wraps if the lettuce is brown. How these foods, and all foods in the meal program, are executed on a daily basis will determine their success with students, no matter their style of processing or preparation.

As in the case of foods prepared in the central kitchen but that students saw coming from a bag, it is also important that staff communicate to students what they are doing. The cues that students get in the cafeteria are a major part of their expectations for the meal service. If the SFA considers its food to be freshly and carefully prepared, it should make sure students see that too. Most effective would likely be actual improvements to foods' intrinsic cues such as the look and smell. These could be expected to go along with improvements in food quality and attention to execution.

Meal program staff could also communicate to students about other characteristics that students seem to value. Although how much gets through to students may be unclear, advertising and marketing could better highlight qualities that students value, namely freshness and realness. Some students also may value indications about where food came from, even if not local. Other cues, such as whether food is pre-packaged or wrapped in plastic, might change students' sense of the quality of food preparation.

Beyond traditional advertising posters and announcements, more transparency about how the food is prepared and where it comes from could help give students a better picture of what they are eating and ideally that it aligns with their standards for how food should be produced and prepared. For example, students might benefit from an annual cafeteria tour in which they see that cafeteria staff do prepare food and that some things come into the kitchen fresh. They could also learn about the cafeteria's food safety practices, perhaps in connection with a science class, to ease mistrust.

A general awareness of and trust in what the cafeteria staff are doing might push back against the negative stigma related to school food. Students' expectations for individual foods and the program overall might become more positive and potentially positively impact their experience as well. Ultimately, though, these expectations must be backed up by students' regular experiences with the food itself. And of course, implementing these suggestions likely will require increased resources, of money and, as detailed below, time.

### *Feedback*

SFA staff need feedback from students in order to prioritize the meal service characteristics that their clients care most about. And staff must also hear from students about whether the meals have met students' standards. Meal program staff do solicit some student input. However, as noted above, while they may get students' perspectives on individual items in test situations, SFAs do not generally have institutionalized mechanisms for regular student feedback on the food or other elements of the meal service as students actually experience it.

SFA staff generally rely on records of how many students participate and what they select, or their own observations of what students select and eat. For the purposes of reporting to the federal government, as well as for their own information, cafeterias keep detailed records of who and what they serve each day. The number of meals sold is often compared to the number of students in the school or who were present that day to determine the participation rate, that is, the percentage of students who took a school

meal. These figures are often used by SFA staff to monitor the overall acceptability of the program.

In at least four of the SFAs in this sample, school-based staff also tracked the number of portions of each item that are selected (SFA-VA, SFA-IA, SFA-FL, SFA-SC). Evaluating this data gives the cafeteria manager or the district-level staff information about how many students chose each food. These records are often used to compare how well certain items perform against others in terms of sales, and from that comparison, staff draw conclusions about which foods students prefer.

Staff also used estimations of what students throw away to judge what they are consuming. This is usually done by observation. Staff, especially in the cafeteria, often referenced what they see going in the trash can. As noted in Chapter Two, a popular way to evaluate school meals programs is through plate waste studies. While not every school or SFA would have had a plate waste study conducted, the results from this type of research are part of the discourse on school lunch which can influence the received wisdom about what students do and do not like.

For all of these types of records, the units of analysis are meals, students, and items. There is no further detail about why students did or did not consume a particular item. As a result, when using these records to understand the program, the only way to explain what drives student participation is the item and whether the meal was offered for free, a reduced price, or full price. Because that is all that is visible, those become the answers that SFA staff use. If participation is different between schools or changes over time, the only variable to explain it are the differences or changes in free and reduced-

price meal qualification rates. Similarly, if more students choose the pizza over the lasagna, it must be because they prefer pizza. However, we don't know if that reflects a general liking for pizza over lasagna, or a preference for that specific pizza over that specific lasagna, or some entirely different phenomenon.

Using more student feedback, gathered in a variety of ways, could provide better information to inform staff understanding of students' expectations and experiences. The SFA-KY Student Nutrition Advisory Council (SNAC) offers a model that could be expanded. Groups of students in 30 schools, across levels, met regularly to give feedback on particular items. This feedback could include other elements of the meal service experience, such as the overall variety of the menu, interactions with staff, and the cafeteria environment. These students could also get opportunities to learn more about the cafeteria staff and processes. SFAs could also do focus groups that require less commitment from students: in SFA-GA district-level staff did a series of one-off listening sessions with students to learn more about their perspectives. Whatever the model, the SFA should make these regular practices, and ideally within each cafeteria, so they can remain abreast of any issues and aligned to potentially changing desires and experiences of students.

Given the opportunity, students seem willing to provide detailed feedback (Bailey-Davis et al. 2013; Hermans et al. 2017). A leader in SFA-IA described his experience getting students' opinions on taste tests:

The elementary student, I would have never thought they could have articulated some of the descriptions or reactions to the food we've had. And I hate to say it, but we dumb it down to them; we give them a slip of paper with a smiley face or a frown, and I'll get papers back all the time that they'll circle the smiley face and write on

there exactly what they liked about it. They're capable of a lot more than we give them credit for.

Students in nine schools expressed that they would like the opportunity to give more feedback on their school meals and several had ideas for how to do so (ES-GA, MS-GA, MS-GA II, ES-FL, MS-FL, HS-FL, MS-KY, HS-KY, MS-IA). Three groups suggested that students should vote to remove certain items and bring in others (MS-KY, HS-KY, MS-FL). In two middle school groups, students cautioned against using a survey, indicating that students don't take them seriously (MS-SC, MS-GA). Students in two groups noted that any feedback mechanism should account for the fact that their peers might be likely to give overly negative feedback (MS-SC, HS-SC). For example, a middle schooler in SFA-SC thought they should write down constructive criticism, like "The macaroni didn't have enough seasoning,' or stuff like that. Not to say it's nasty."

The students that had participated in SNAC spoke positively of the experience; however, in one group they said that they didn't see a connection between their feedback and any changes in the cafeteria (MS-KY). Similarly, a few students expressed skepticism that adults would actually listen to them (MS-FL, MS-IA). As her group discussed the value of adding a comment box to the cafeteria, one middle schooler in SFA-IA noted that "they know we complain about it because we tell the teachers, but they don't really do anything about it." "They're not going to change anything," added another. These sentiments indicate the need to make sure that students feel their feedback has been heard and accounted for. Otherwise, these processes would be yet another indication that adults don't care what they think or feel about the meal program.

If staff were able to conscientiously listen and respond to student perspectives, this type of engagement could be another way to improve student expectations of and experiences with the meal program. A district-level employee in SFA-KY considered the SNAC a way to “get that education out there, which then goes and starts spreading and trying to combat that stigma of crappy school food.” A sense of truly being listened to might help mitigate the student sense of adults’ lack of care, helping to build up a more positive attitude about the meal program and contributing to a more positive loop of expectations and experience of the meal. Including students as active participants in shaping the meal program, ideally getting their buy-in to what is provided and how, could help staff provide meals that are not only better in terms of their characteristics but that also contribute to a more positive reframing of what the school meals program is.

Other school food researchers and advocates have reached similar conclusions (Guerrero, Olsen, and Wistoft 2006; Caraher and Drummond 2007; School Nutrition Association 2017). As Guerrero and colleagues (2006) noted, “A focus on food palatability in school meals may provide a valuable medium for students to exert influence in the school environment and help foster a sense of meaningful contribution” (n.p.). However, engaging students to provide meaningful feedback will take training for both students and facilitators as well as time and resources. Staff must also be committed to listening to students, respecting their perspectives, and implementing some of their suggestions, even if they do not take everything at face value (A. B. Smith 2007).



*Time*

Ensuring proper execution, communicating about how staff prepare and purchase food, and engaging students in providing feedback all require more attention from students and more work of staff, especially in the cafeteria. But in the current cafeteria context, staff are already quite busy throughout their workday (Rosenthal and Caruso 2018a), and many students barely have enough time to eat. Resolving the time constraints on both sides of the serving line could help make the above suggestions possible as well as positively influence other elements of the meal service.

As SFAs have tried to incorporate more scratch cooking and fresh preparation, they are asking more of workers in terms of how long it takes them to prepare items and how involved the tasks are. In many kitchens, staff also need more training in order to be able to do new tasks that they may not be familiar with or have not done in a commercial kitchen (Rosenthal and Caruso 2018a). Even simply focusing more on the execution of items in the cafeteria would require more time and attention from the staff. Time issues also would be exacerbated if SFAs are trying to add more daily options to the menu. Adding more variety to the menu can also challenge staff as they must learn how to prepare more items and constantly do different activities.

Adding more workers into the kitchen or offering more hours to current staff could ease some of this time pressure and allow staff the time to be trained on and execute more complex and consistent preparation, even as additional variety might be added to the menu. It could also give staff more time to interact with students in a variety of ways. Running focus groups or other student engagement mechanisms would be much more possible. Staff also might consider providing classroom lessons in food and

nutrition, giving tours of the kitchen, or offering cooking activities as educational or extracurricular activities.

Adding more hours for staff might also help increase dedication and well-being in the kitchen. While many cafeteria staff are extremely dedicated and have worked in school food for years, in these SFAs the majority of school-based workers were part-time employees who only spend a few hours each day at the school. Offering them more hours and accompanying benefits would make these jobs much more appealing and could help decrease staff turnover and understaffing issues, which nearly all the SFAs cited as a concern (SFA-KY, SFA-IA, SFA-FL, SFA-VA, SFA-GA). Similarly, changes to cafeteria jobs which require more skilled labor and complex tasks should be accompanied by increases in wages, which would also contribute to a more reliable workforce. However, in the resource-constrained context of most meal programs, spending more on cafeteria workers may be a difficult decision for district SFA staff to make: labor costs are often seen as a tradeoff for buying higher-quality food.

Dedicating more time to the lunch period itself would further take pressure off of staff as well as students. With a longer lunch period, cafeteria staff may also have more ability to do batch cooking, so that food would be fresher and hotter and they could prepare more if they seemed likely to run out. During service cafeteria staff could pay attention to how foods are holding and how they look, with enough time to adjust these if needed. Further, workers would not need to prioritize moving students through the line quickly, opening up more time for them to interact with students, whether offering

information about the foods offered, suggesting fruits and vegetables or special items, or offering tastes of items students might not be familiar with.

Making the lunch period longer would also be beneficial to students. As noted in Chapter Four, students saw the short lunch period as a major barrier to their ability to eat and enjoy their lunch. A longer lunch period would allow more time to get to the cafeteria, go through the lunch line, and eat. With less time pressure the line itself might be less chaotic, and students and staff could more easily engage with one another. Students indicated openness to this possibility – a middle school student in SFA-IA said, “I would like to interact with [the cafeteria staff] more, but we don't really have time.”

For students a longer lunch period would also offer more time to get to eating all of the components instead of prioritizing the entrée, as literature suggests they currently do (P. Johnson et al. 2015; Fox and Gearan 2019). Younger students, who may struggle with manipulating silverware or are more easily distracted, may also be more likely to eat more given more time. With more time, students also would feel less of a trade-off between eating and socializing or other priorities for the lunch break.

But finding more time for lunch during the school day is a difficult task. School administrators control the length of the school day and timing of lunch periods, and there are many competing priorities for students’ time. Making the lunch period longer may also be difficult given the physical infrastructure of the school: if more students need to eat at one time, the cafeteria may not be able to serve and hold them all.

One high school included in this study had successfully experimented with a single, hour-long lunch period. The students were quite enthusiastic about it: they

appreciated the time to not only eat but also to do other activities, whether attend a club meeting or make up a test. While the lunch lines might be crowded initially, eventually they lessen. However, because the cafeteria could not fit all the school's students, they were allowed to congregate in the library as well as certain hallways, which required teachers and administrators to act as monitors. Students appreciated this freedom and the ability to choose the eating environment they preferred but did note that it required continued good behavior from the entire student body.

## Conclusion

Staff and students can look at the same school meal and see something completely different. SFA staff may think they are providing fresh, appealing foods, which they can encourage students to eat by putting them on the line and telling students that the offerings are tasty and good for them. Students, however, may see that meal as the same thing they've been eating since kindergarten, sure that it will be cold or greasy but reconciled to the few items they prefer and hungry enough to at least eat something. Staff members may recognize that students primarily care about the taste of foods without seeking out more details on why students do or do not select or eat certain items. Staff may see themselves putting a great deal of effort into offering meals they want students to value, but students may not value them or even see the care. Staff may be following guidelines and practices that they are required to, and even that students would want to know exist, but students may not notice these.

Overall, staff members and students seem to have different understandings of what the meal program offers and its potential value. On one side of the co-production

process, staff use their beliefs about what students want to guide their production of the meal offering. On the other, students' priorities mean that their reactions may not be what staff hope for. Constraints may influence the extent to which providers can adjust their activities to enhance the offering, and recipients' responses will depend on a range of factors, many of which are outside the control of program providers. However, the comparison of client and provider perspectives on the meal shows multiple opportunities to align how the two sets of actors perceive and engage in this co-production process. They suggest that seriously engaging with how clients and providers see the program could offer concrete ways to make co-creation of value more likely.

The suggestions offered in this chapter aim to better reconcile staff and student perceptions of the school meal. SFA staff could more diligently try to understand the student perspective through regularized feedback mechanisms, which would inform their perceptions of what students value and what influences their behaviors. Such information could guide staff to offer a meal that reflects the characteristics that students find important, especially in terms of the food quality. While such activities will likely require more staff time, and thus more resources, ideally they would help staff create a service offering that students perceive positively and will take advantage of. That way, if students participate in the NSLP and eat the meal, they create value for themselves and their families as well as for a society that wants to see them healthy and well-fed.

# Chapter 8: Conclusion

## Chapter 8: Conclusion

### Understanding NSLP Implementation

There is much that works well about school food in the US. Nearly 30 million children participate in the National School Lunch Program (NSLP) every day (“National School Lunch - Participation and Meals Served,” n.d.). Of those who most need it – the students who qualify for a reduced-price or free lunch – 78% take advantage of the meal (Fox and Gearan 2019). And many students eat not only because they are hungry but also because they enjoy their lunch. In this study some students referred to their lunches as “delicious” or “fresh” and named foods that they thought were “good,” “tasty,” or “the bomb dot com” (HS-VA). They also spoke of the cafeteria staff who “are very kind” (MS-FL) and “really care about what you eat and ... want you to have what's best and what's healthy” (ES-KY).

As the last quotation indicates, these positive comments, as well as high student participation rates, are possible even as schools are serving healthier meals. A major study by the U.S. Department of Agriculture (USDA) found that implementation of the Healthy, Hunger-Free Kids Act (HHFKA) has largely been successful without increasing costs or compromising student participation (Fox and Gearan 2019). Since its implementation, the nutrient content of school meals has improved, with major increases in servings of whole grains, green vegetables, and beans and decreases in refined grains, empty calories, and sodium. Schools are able to serve these foods without spending more: lunches meeting the HHFKA nutritional guidelines showed no significant

difference in cost from those that did not. The researchers further found that student participation was positively associated with healthier meals (Fox and Gearan 2019).

But there are more students who could be taking advantage of a low-cost, healthy meal available at school. Only 35% of students who do not qualify for meal benefits participate in the program (Fox and Gearan 2019). If we believe that school meals enhance students' health, then financial need is not the sole determinant of whether students could benefit from the program. Greater participation in the NSLP helps not only students but also their peers and the program as a whole. With more students participating, stigma connected to eating at school lessens. And as more students, especially from different class backgrounds, eat at school, the NSLP develops a broader-based constituency to advocate for school meals to policymakers.

Many school food authorities (SFAs) are encouraging greater participation by finding ways to serve many or all students in their schools for free. Almost 90% of SFAs use direct certification to enroll eligible students for free meals (USDA FNS Office of Policy Support 2019a).<sup>23</sup> Roughly 20% of schools offer all meals for free; 80% of them use the Community Eligibility Provision (CEP), which allows all students to eat at no cost if enough qualify for meal benefits.<sup>24</sup>

Reforming the NSLP to make meals free for all students is the desire of many school food advocates. But even if all meals were free, those delivering the NSLP would

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<sup>23</sup> Direct certification refers to the immediate enrollment of all students whose families qualify for certain public benefits (e.g., the Supplemental Nutrition Assistance Program and Temporary Assistance for Needy Families) as eligible for free meals, without the need for families to fill out an application.

<sup>24</sup> CEP allows schools in which at least 40% of students have been directly certified as eligible for free meals to serve lunch and breakfast for free to all students and receive reimbursement at the free meals rate, without collecting any applications from families or tracking student participation.

still need to get students to eat them, especially the healthier components. A universal free meal program would be a major investment of government resources; it should not only prevent hunger for students who are food insecure but also promote the health of all students by helping to prevent diet-related disease and encouraging lifelong healthy eating habits. Such outcomes require that students regularly eat, and eat healthy offerings. As the price of meals goes down or is even removed, more students will participate, but some will still need to be convinced of the value of eating at school. Further, when students do go through the lunch line, they may not choose the items that they or staff members see as the healthiest. And even when required by the regulations to take fruits and vegetables, students may not eat them (Stephens and Byker Shanks 2015). We cannot assume that just because students take a meal they are getting the full benefits available to them, especially in terms of their health.

Current school food literature suggests that students have generally responded positively to interventions designed to change what they eat, especially those that combine strategies such as food environment changes with education (Meiklejohn, Ryan, and Palermo 2016; Graziose and Ang 2018). However, we know little about the mechanisms at work in such interventions; only a few researchers have explored why students make the eating decisions they do (Zhao et al. 2019; Trapp 2018; Asada, Hughes, et al. 2017; Payán et al. 2017; Chatterjee et al. 2016). In these studies students cite the palatability of meals, features of the cafeteria such as time and lines, and social factors as influencing whether and what they eat at school. This dissertation adds to this literature, in particular by taking seriously the co-constitution of experience and



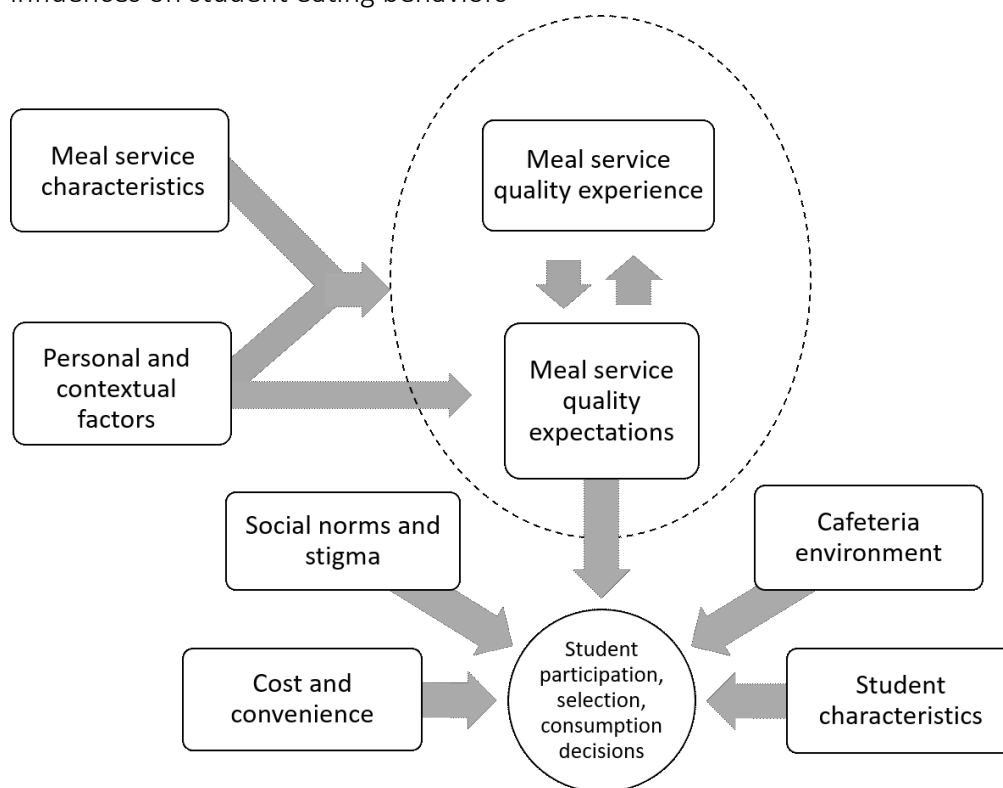
expectation. The participants in my study suggested that a wide range of elements contribute to students' eating behaviors at school. Primary among these are students' expectations for the quality of the meal service. Their beliefs about the lunch experience affect whether students decide to participate, and their expectations for individual food items affect which foods they select and ultimately eat.

The previous chapters have outlined these determinants of students' behaviors related to the NSLP – whether they participate, which items they select, and how much they eat – and particularly explored the factors influencing students' expectations for the quality of the meal service. The students who take part in the program and the staff who provide it suggested many of the same elements as influences, but their understandings also differed in some ways. Combining their perspectives gives a fuller picture of the range of potential factors that affect student meal service expectations and resulting behaviors. Comparing their perspectives shows where staff members' ideas about what is important to offer and what they try to maximize in the meal service offering may not align with what students think is valuable and what they perceive in their own experience of the meal.

Figure 8.1 (previously included as Figure 1.2) shows the elements that both staff and students thought influence students' decisions about whether and what to eat at school. Students and SFA staff both suggested that students' expectations for the quality of the meal service and particular items play a major role in students' decisions about whether to participate and what to select and eat if they do. The physical and social environment of the cafeteria, especially the amount of time that students have, can also

encourage or discourage students from eating at school or eating certain items. Who the student is makes a difference as well: students who need the meal, whether due to food insecurity or simply being hungry, will be more likely to take and eat it. Other students might not eat at school or will avoid certain items because of dietary restrictions.

Figure 8.1. Determinants of meal service quality expectations and connection to influences on student eating behaviors



Students and SFA staff both suggested that students' expectations for the quality of the meal service and particular items play a major role in students' decisions about whether to participate and what to select and eat if they do. An elementary school student from Georgia pithily summed up many students' expectations for meal service quality: "Maybe we will eat if you served better food." SFA staff recognized that finding and serving items that appeal to students is key to encouraging them to eat at school.

Staff and students agreed on several characteristics of what makes items desirable: their taste, appearance, and freshness in particular.

They also both recognized that students' past food experiences influence what students choose and eat in the cafeteria. SFA staff emphasized the role of students' familiarity with certain types of foods, especially due to their food culture at home, and saw exposure and education as tools to change students' perceptions of school foods. They also saw advertising as a way to change students' expectations for school food in general and help combat cultural stigma around school meals.

Students themselves suggested that their past food experiences matter because they know what foods "should" be like. As a result of having eaten certain types of foods at home or in other contexts, they have standards for taste, freshness, and other characteristics, and they want school foods to align with these, i.e., to be "real." Students also implied that past experiences of foods *at school* affect their expectations for what certain items, or school meals in general, will be like.

Healthy foods, particularly fruits and vegetables, follow the same pattern. Staff members tended to focus on students' lack of familiarity with these types of foods as the reason they are reluctant to select and eat them. Students themselves didn't explicitly display a lack of knowledge about healthy eating or significant stigma toward healthy foods. However, students did highlight the poor taste and quality of healthy foods at school as a barrier to eating them. Different from staff who may be more steeped in a nutritionist paradigm, students use broader criteria to decide what to eat and are not willing to sacrifice characteristics such as taste for purported nutritional benefits.

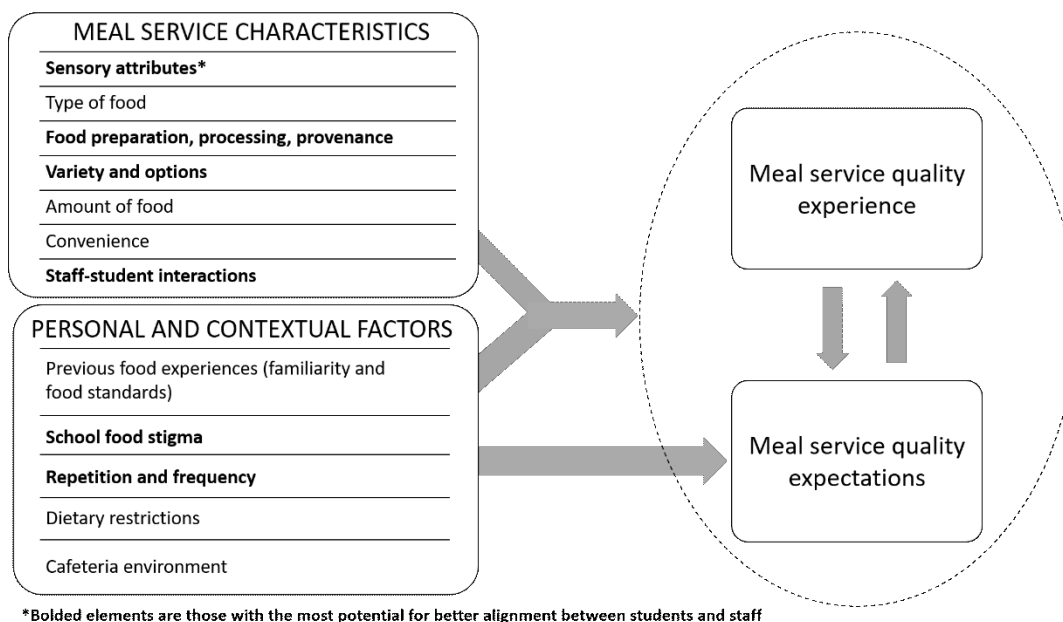
Staff may not recognize some of the other contextual factors that affect the student experience, such as dietary restrictions and the frequency with which students eat at school, and students' resulting need for variety and options in order to see the meal service as high-quality. Positive interactions in the lunch line, which communicate an underlying sense of care from the staff, are another important element of the meal service. Even though staff may value providing good customer service, students may not understand or interpret staff activities as staff intend them.

So while much of what SFA staff would like to provide in the meal program should appeal to students – tasty, fresh, familiar foods offered with care – often students do not perceive the meal service this way. Though SFA staff work hard to follow NSLP guidelines and best practices to provide what they see as a quality meal service, they may not recognize that some elements are not translating to the student experience. Similarly, students do not see the effort that staff members put into providing the meal service and the ways in which it actually may align with what they seek.

If students do not have positive experiences of the meal service and thus do not have positive expectations for it, they may choose to avoid certain foods or not participate at all. When this happens, the public value of the NSLP is not created. The program's value is in the prevention of student hunger and the promotion of student health – so if students don't eat or don't eat healthy foods, there is no public value created. Nor is there private value created: if students do not participate, they cannot benefit from the meal, and their families do not benefit from the subsidy intended for them.

Thus student perceptions of the meal service are a major factor in the success of the NSLP as a policy, through their contribution to students' co-production behaviors. On the other side of the co-production process, the SFA must offer a service that students want to take advantage of. Staff members' activities in the meal program are guided by their beliefs about what students want. Staff may think they are providing a meal that will generate value for students in terms of taste, health, or satiety. But students may not see the meal as offering the characteristics that they seek. If SFA staff do not understand students' perceptions of the service offered and the factors influencing those perceptions, any steps they take to encourage students to create value through using the service may not have the desired effect. Staff and student perceptions of the value offering – what it should be and what it actually is – must align for co-creation of value and the desired program outcomes to result. Figure 8.2 adapts Figure 1.3 by highlighting the characteristics of the meal service and the personal and contextual factors that seem to have the most potential for better alignment between student and staff perspectives and activities. (These are described in more detail in the section on implications for SFA staff below.)

Figure 8.2. Determinants of meal service quality expectations and experience



Such alignment requires attention to the many elements that have bearing on how students respond to the school meal. Across states, SFAs, and schools, these elements combine in different ways to determine the ultimate success of the NSLP in terms of whether and what students are eating. These influences on student eating behavior reflect the various scales of food choice determinants suggested by relevant literatures, namely the Determinants of Nutrition and Eating framework and socio-ecological models (Stok et al. 2017; Contento 2008). These include individual factors (e.g., hunger and knowledge), interpersonal factors (e.g., family food practices, social influences, and cultural beliefs about food and health), and environmental factors (e.g., attributes of the food, cafeteria space, and nutrition education). Beyond those discussed in this dissertation, there are other potential influences that may affect whether and what students eat at school and so could also contribute to how well the NSLP works. These include parental beliefs (Meyer, Lambert, and Blackwell 2002; Ohri-Vachaspati

2014), student identity and self-image (Ludvigsen and Scott 2009; Harrison and Jackson 2009; Fielding-Singh 2019), and media and food advertising (Krølner et al. 2011; Story, Neumark-Sztainer, and French 2002).

We can consider these all factors in the implementation of the NSLP – from the bumpiness of the apples to students’ dietary practices to district-level advertising campaigns. Many of these determinants of implementation success are not accounted for in the development and practice of school meals policy. Some elements might not be recognized as potential barriers by those who could address them, such as cafeteria staff not recognizing the lack of care that students feel or school administrators who might not see the need for a longer lunch period. In other cases, those with the power to address issues may be aware of them but unable or unwilling to intervene. For example, menu planners know that students prefer variety; however, they may not be able to provide it within the existing time and money constraints. Some major determinants of NSLP implementation, such as lack of funding, could be addressed by federal legislation but have not been.

Even with recognition of these many factors and the will to deal with them, addressing these issues in order to improve NSLP outcomes may still be difficult. Cultural factors such as school meal stigma, food trends and habits, and ideas about health and nutrition go far beyond the ability of individual actors to control. These may demand creative solutions by the many stakeholders involved in the NSLP. Further, the interconnected nature of the factors influencing NSLP implementation means that addressing one concern may create or magnify others. For instance, improving the

sensory attributes of the food served at school or making meals free may encourage more students to participate, which might mean longer lunch lines such that some students are unable to access and eat a meal in the time allotted. Also, the ways that elements affect one another and thus how to successfully address them may look different in different places, given the particular context of the school, SFA, or state. It is also important to note that this dissertation's scope did not include the structural constraints that SFAs face in providing school meals, such as the lack of funding, aging or non-existent infrastructure, and staffing difficulties, which play a major role in determining the program that is delivered and thus whether it is accepted. It also could not take into account the effect of various identities related to class, race, and gender or NSLP actors' beliefs about them.

In sum, these findings indicate that to understand what contributes to successful policy implementation, we must consider personal, environmental, material, social, and cultural elements that are not generally thought of as part of the policy process. Because programs are delivered in the real world, to real people, features of that world and those people will affect what is delivered and how it is received. A focus on implementation reveals that much more than the policy legislation or regulations determines how the policy works "in the world of action" (Hill and Hupe 2014, 203). Theories of street-level bureaucracy stress the role of certain types of program providers and the context in which they work as determinants of implementation outcomes (Lipsky 1980; Maynard-Moody and Musheno 2012; Brodtkin 2015). My findings confirm the importance of on-the-ground program staff and also suggest the influence of program clients. Literature on



co-production and value co-creation similarly highlights a role for program participants, and it provides a starting point to understand how clients contribute to program implementation and design (Alford 2002; Sharp 1980; Whitaker 1980; Osborne and Strokosch 2013).

This dissertation contributes to these literatures by highlighting the broad range of factors that affect program implementation, in this case, through their effect on the behaviors of the program's co-producers. It also suggests the need to understand not only the program providers or the program clients but how they interact and the ecosystem that influences them. There is no single actor or contextual feature or relationship that determines how programs are implemented and no single way to understand how implementation succeeds or not. Rather, robust explanations of policy implementation will include a constellation of elements from the micro to macro, tangible and intangible, enmeshed with one another and operating in a particular setting. For best results, interventions to encourage desired program outcomes must holistically consider and address this broad range of factors.

## **Implications and Recommendations**

This dissertation has offered a framework to understand students' eating behaviors at school, as suggested by the staff and students in this study. It also offered suggestions for SFA staff as they try to understand and respond to students' perceptions of the meal service. Below are recommendations for practitioners, policymakers, advocates, and researchers directly involved with the NSLP. The final section offers implications of the above conclusions regarding policy implementation that may be

applicable to those involved with other social service programs, especially those involving food.

*For SFA Staff*

Creating positive school meal service experiences is key to encouraging students to eat at school and to eat healthy foods. Much of what SFA staff already do supports this aim. Many of the district-level and cafeteria employees included in this study were conscious of the quality of the food that they serve and tried to maximize taste, appearance, and freshness in the foods they purchase and prepare. Menu planners showed commitment to serving types of foods that students enjoy while also exposing them to new items. Cafeteria workers tried to engage positively with students during hurried interactions in loud cafeterias. Given their hard work, SFA staff at times expressed dismay about what students eat at home and the implications for whether they will eat what staff see as the healthy, high-quality meals offered at school.

But SFA employees will never be able to change students' eating environments outside of the cafeteria – they can only control the food at school. Cafeteria staff can focus on executing items to maximize their sensory attributes, making sure they are properly cooked and served with the appearance, temperature, and texture that students will find appropriate. Making items as appealing as possible is important to positively impacting students' expectations and experience.

Serving a menu that offers variety over time as well as choices on a daily basis can also enhance the student meal service experience. Students value agency and expect to be able to choose between at least two appealing options. They also expect choices even

if they have dietary restrictions. Many are used to eating environments that offer extensive choice and variety, so providing these at school will help meet students' standards for quality in the eating experience.

Maximizing characteristics that students value is especially important for healthy foods. SFAs should continue to provide education so that students know which foods are healthy and why they should eat them. In addition, SFA staff can provide a variety of well-executed, high-quality healthy foods that students will see as appealing to select and eat. Students may be more familiar with these foods than staff expect, and thus staff must try to meet students' standards for how they taste. For those students less familiar with certain types of healthy foods, offering samples and other low-risk opportunities to try items could help build students' positive expectations for items they previously may have not recognized or trusted they would like.

Staff can also try to encourage students to have more positive expectations of school meals. SFAs could enhance their current education and marketing efforts with other forms of communication. Students value much of what SFAs try to provide, namely fresh foods from quality sources that are prepared in the school with high standards for safety. Cafeteria staff can offer cues as to these characteristics, for example, by showing more of their in-house preparation and highlighting the freshness of items. They can also try to remove some of the opacity that surrounds school meals: students do not tend to know about or see the guidelines that staff follow and the efforts they make to provide what they think students will want. Communication and transparency about what cafeterias purchase and how they prepare it may help change students' perceptions of

school foods. Programs that bring students into the cafeteria or central kitchen could also be used to dispel myths about how the meal program works. During the interviews in this study, students' criticism of the meal service often softened as they recognized the constraints that cafeteria staff face; learning more of the full context for the school meal service might help mitigate student complaints.

Staff can also try to communicate their own sense of care for students and for the quality of their lunch experience. Many SFA and cafeteria staff are motivated by a desire to provide an appealing meal to students and support their well-being. Students may not always recognize this care; however, if they did, it might help improve their meal service experience and provide a more positive cafeteria environment context. Feeling that the staff and the SFA are concerned about the school meal may also lessen students' distrust of the program and ensuing low expectations.

Students may feel a greater sense of care if staff show that they are interested in learning about students' experiences. Ideas about what students want drive much of what staff do, so staff should hear directly from students about what that actually is. Also, institutionalized mechanisms for students to provide feedback and engage more directly with the NSLP could help students feel a greater sense of ownership of the program. If they see their concerns addressed with improvements in the cafeteria, not only their experiences but also their expectations for the program may improve. Building relationships between students and cafeteria or district-level staff outside of the lunch line could improve relations within the cafeteria as well as push back against negative stigma associated with "lunch ladies" and school food.

Involving students to improve the delivery of the NSLP could be, at its most robust, an opportunity to develop students' sense of themselves as citizens and their ability to participate in civic discourse. In the NSLP, students are the recipients of a multi-billion dollar policy initiative – and they are crucial actors in this public program. They, as citizens, should have explicit input into what the government does. Supporting their meaningful participation in decision-making about school meals could be a form of governance that is valuable not only for its immediate benefit to the goals of the program but also as a way to prepare students for future democratic participation in political and other situations.

SFA staff might balk at spending more time engaging with students about school meals, skeptical of children's ability to offer meaningful feedback or to provide suggestions beyond serving more junk food. Of course, implementing student ideas would still have to fit within the boundaries of the NSLP guidelines. However, this dissertation demonstrates the wide-ranging and often nuanced opinions of students related to food and healthy eating. Deeply engaging with students, as opposed to assuming what they like or soliciting surface-level suggestions, could provide valuable feedback for the SFA as well as facilitate stronger relationships between staff and students. Directly communicating with students offers an opportunity for SFA staff to get more information about the broad range of factors that influence students' eating behaviors at school, potentially raising issues they were not previously aware of or generating strategies about how to address concerns about the meal experience itself or other issues related to student eating behaviors.

This information can complement the work that SFAs are already doing to respond to what they see as the determinants of students' eating behaviors. The SFAs included in this study constantly adjust what they do in an effort to more effectively implement the NSLP, and they consider some of the many elements noted above that can affect meal program success. Program activities may vary across SFAs but reflect similar themes: for example, all of the SFAs in this study prioritized serving fresher food to students. SFA-FL does so by prioritizing purchasing regional produce and preparing it in production kitchens, while SFA-IA and SFA-KY use a central kitchen model to create meal components that schools can combine. These variations reflect differences in SFA size, infrastructure, and priorities, and reflect that SFA staff will always have to account for the on-the-ground reality in their own school or district.

Although SFA staff must always work within the context of their own school or SFA, some of the structural constraints they face are common across states and the nation. SFAs operate at the intersection of tight budgets, many regulations, and multiple stakeholders. Executing better food and engaging in dialogue with students would create more work for the already busy SFA staff. It also requires more money to purchase higher quality food, develop infrastructure for food preparation, and employ and train more staff. Not only listening to students but also implementing what they suggest might go beyond the resources currently available to many SFAs.

#### *For Policymakers*

These time and resource constraints are part of the constellation of elements that affect NSLP implementation. Although policy legislation and regulations do not determine

program outcomes, they do provide structure for how programs operate. Thus legislators and program regulators can contribute to improving NSLP outcomes by adjusting program regulations to better reflect the reality of implementation on the ground.

In the absence of increased resources, most recommendations to improve the NSLP put schools on the leading edge of encouraging dietary change in children without adequately funding them to do so. Policymakers do not require companies to reduce sodium in their products or to avoid marketing junk food to children. Instead, schools, because there is political will to regulate them, become the site to protect and promote children's health. Policymakers truly concerned with promoting children's well-being would look beyond the NSLP to address fundamental determinants of health such as poverty and racism by supporting good-paying jobs, robust social services, and fair taxation. They could also address corporate control over the kinds of food produced and how they are distributed as well as the profits that businesses make by stoking desire for unhealthy food without bearing any of the consequences of resulting poor health. The NSLP can only address the symptoms of these bigger social issues by making sure students have access to at least one healthy meal a day.

But supporting a robust school lunch program is more politically feasible than finding solutions to entrenched systemic problems, and there are many ways the NSLP could meaningfully expand and improve. Universal free school meals is a bold proposition that could help solve some of the current issues of school food. If all children became eligible for a free lunch, while maintaining the other elements of how the NSLP

operates,<sup>25</sup> SFAs would benefit from more funding through increased participation as well as a major reduction in paperwork and related staff time to certify students and claim reimbursement. More money could go toward purchasing high quality food and paying staff for activities such as those suggested above. Further, the social stigma or norms that may prevent some students from participating could be reduced if more students eat at school. With greater recognition of the value of all students eating at school, lunch might become a more respected part of the school day and less a joke in the cultural consciousness.

Short of making all meals free, policymakers have the opportunity to provide more funding to schools through the National School Lunch Act reauthorization process, which takes place every five years. Lawmakers can decide to update regulations related to the program, as they did in 2010 with the HHFKA, including increasing the rate of reimbursement that schools receive for each meal they serve. Legislators could also address other structural constraints that SFAs face in providing the program by designating money for kitchen infrastructure, as was the case until the 1980s, or for technical assistance and training (Poppendieck 2010).

Recognition of the many factors that contribute to the success of NSLP implementation means that federal and state legislators could intervene in other ways. They could direct the USDA to provide guidance for SFAs related to a host of issues such as student engagement, food quality, menu development, or the cafeteria environment.

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<sup>25</sup> This is the suggestion from the Universal School Meals Program Act, introduced in October 2019 by Senator Bernie Sanders and Representative Ilhan Omar (U.S. Congress, House 2019b; U.S. Congress Senate 2019).



Policymakers could also address the length and timing of the lunch period.<sup>26</sup> Other actors in local and state government, such as state regulators, health department officials, school boards, and superintendents, can also contribute to these kinds of initiatives in the policies that they implement. School and district administrators have significant control over elements affecting the meals program such as lunch period length and timing, the built and social environment of the cafeteria, and other school policies related to lunch (such as whether students are allowed to leave campus).

Ideally, such policymaking processes would reflect perspectives of both SFA staff, including at the school level, and students. Legislators, regulators, district administrators, and others setting school meals policy should seek input from those involved day-to-day in the NSLP who have important insight into what affects their activities and how to make changes. Without such input, policy interventions may not address the most important factors contributing to NSLP implementation, or they may not have the intended effects. Because of the breadth and interconnectedness of the factors influencing implementation success, improvement to the NSLP cannot come from any single policy change but will be a process of shifting and evaluating that will require the input of those experiencing the changes as they play out in context.

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<sup>26</sup> Sixteen states and the District of Columbia have laws related to the time students have to eat, and such laws are associated with schools providing at least 30 minutes of lunch time for students (Turner et al. 2017). In December 2019, Representatives Suzanne Bonamici and Kim Schrier introduced the Healthy Meal Time Act to provide schools with best practices in timing and length of lunch periods (U.S. Congress, House 2019a).

*For School Food Advocates*

Ideally, parents, community activists, nonprofit organizations, foundations and other advocates for improving school food would encourage lawmakers regarding the above policy changes. It was such a coalition that helped bring about the meaningful HHFKA in 2010 (Harrington 2017; C. Schwartz and Wootan 2019). Changes at the federal level are powerful in their impact across schools, regardless of the leadership in individual SFAs or states. However, many advocates choose to intervene directly in particular SFAs or schools instead of engaging in national or state-level politics. The co-productive nature of the NSLP helps make this possible – changing students’ behaviors is a direct way of changing the program itself.

School food interventions often focus on education to change students’ eating behaviors, through mechanisms like gardening, classroom education, and produce-tasting. Such efforts are considered important to developing students’ knowledge of and familiarity with foods and have been found most effective when combined with other strategies, such as peer influence and changes to school food environments (Meiklejohn, Ryan, and Palermo 2016; Taylor and Johnson 2013; Graziose and Ang 2018; Contento 2008). Advocates can also support SFA efforts to offer positive experiences of healthy school meals in the cafeteria setting, so that students’ actual eating patterns will reflect the knowledge imparted in the classroom. Advocates could address the influences on students’ eating behavior described in this research, such as sensory attributes and variety, by helping to make the cafeteria’s healthy foods more appealing.

Doing so implies a reconsideration of the hegemonic nutrition framing of most educational efforts and the faith that if students “know better,” they will make “better”

decisions. Without such a reconsideration, school food programs may reinforce a problematic dynamic of nutritionism: students know that they are “supposed” to eat healthy foods, but when the foods taste bad, this imperative conflicts with their intuitive knowledge that they want to eat what is appealing. Students either will internalize that healthy foods taste bad and try to avoid them, or they will force themselves to prioritize nutritional content over other ways of knowing food. While the latter might be how many adults approach food-related decisions, it is worth considering whether either mindset is optimal for students’ future eating habits. It is also important that students enjoy the healthy foods that they know they are supposed to eat; otherwise, they will not have positive expectations for healthy foods in other contexts. Without such expectations, the NSLP will not be able to fulfill its goal of creating long-term public value by supporting children in developing a healthy relationship with food.

School food advocates can also support SFA efforts to engage students in the evaluation and design of programs. For example, FoodCorps, a national nonprofit organization that connects students to healthy food, recently launched an initiative to help students vote on preferred items and provide other feedback about their cafeteria experience (O’Connor 2020). For-profit businesses that provide food preparation technical assistance can also assist schools in producing fresh, healthy meals that students will enjoy, as is currently being piloted in the New York City school system (Trent, Ijaz Ahmed, and Koch 2019). An evaluation of this pilot program to produce scratch-cooked meals in New York City highlighted the many factors that the program providers had to address, from training and equipment to lunch period timing and

community feedback – which underscores the multi-faceted nature of NSLP implementation and the need for those developing interventions to work with many types of actors to address many types of issues.

It is also important for those who would like to see changes in NSLP implementation to recognize the efforts that SFA staff, at both the school and district level, already make to maintain and improve school meal programs. Just as SFA staff must listen to students and policymakers should take cues from frontline workers, advocates should learn from those involved in the daily operations of the SFA and respect their perspectives and knowledge as they work together to shift the factors affecting how the NSLP operates.

#### *For School Food Researchers*

Academics are often involved in school meals interventions, and they could support greater innovation in methods used and questions asked. This dissertation has highlighted the need for more research to understand how students' perceptions of school foods are created, such as how familiarity, liking, and exposure are related. Other elements that affect students' eating behaviors also would benefit from greater exploration. Stigma in the NSLP, especially related to class and income, and the built and social environment of the cafeteria are two other areas of the meal program that may have a large effect on student behaviors yet are not well understood. Research that more explicitly considers student differences, especially by age, could greatly refine the findings in this dissertation, as would studies of different types of SFAs, especially those with fewer enrolled students and in rural areas.

Such research should build on work that documents *how much* students eat by expanding to investigate the reasons *why* students eat what they do, especially using qualitative techniques to understand perspectives of various stakeholders. School meals studies often rely on quantifiable variables such as school demographics, eligibility for reduced-price meals, and type of food consumed but have not successfully connected these indicators to student consumption. Developing meaningful explanations of what happens in cafeterias and how to change it will require investigating the broader range of factors that contribute to the NSLP. Doing so will require greater inclusion of students and workers as informants, by asking them directly and by observing their behavior to see how it aligns with what they report. The school food literature would also benefit from more cross-SFA comparisons to illuminate similarities and differences in implementation challenges and strategies and to understand how these relate to particular contexts. SFAs would also benefit from the generation of more detailed and practical recommendations by academics.

Using tools of public policy and public administration analysis would also help scholars develop a fuller understanding of the NSLP. The program has not typically been analyzed within these fields, and this dissertation indicates the potential fruitfulness of using a public administration lens on the NSLP. Considering students as clients of a social program frames them as agents in the cafeteria, not just black boxes who may or may not reject what is offered. Similarly, cafeteria workers are not usually conceptualized as important to understanding how the NSLP works. Taking students and staff seriously as

contributors in this program could encourage different ways of engaging with them both in research and in practice.

Table 8.1. Recommendations for SFA practitioners, policymakers, advocates, and researchers

	Recommendations
SFA practitioners	<ul style="list-style-type: none"> <li>• Focus on executing items to maximize their appeal to students, especially in terms of sensory attributes</li> <li>• Provide daily options and variety in the menu over time</li> <li>• Communicate to students about what is purchased and how it is prepared, e.g. highlighting freshness and items made in-house</li> <li>• Communicate with students about program guidelines and constraints</li> <li>• Communicate sense of care for students and the quality of their lunch experience</li> <li>• Develop institutionalized mechanisms for students to provide feedback and engage more directly with the meal program</li> </ul>
Policymakers and administrators	<ul style="list-style-type: none"> <li>• Increase funding for SFAs</li> <li>• Make meals free for all students</li> <li>• Consider the broad range of factors that affect student eating behaviors when designing policies <ul style="list-style-type: none"> <li>○ Provide guidance and assistance for SFAs related to issues such as student engagement, food quality, menu development, and the cafeteria environment</li> <li>○ Address the length of the lunch period</li> </ul> </li> <li>• Seek input from those involved day-to-day in the NSLP on design, administration, and evaluation of policies</li> </ul>
Advocates	<ul style="list-style-type: none"> <li>• Encourage lawmakers to increase funding for school meals and consider a broad range of factors when making policies</li> <li>• Support SFA efforts to offer appealing experiences of healthy school meals in the cafeteria setting</li> <li>• Support SFA efforts to engage students in the evaluation and design of the meal program</li> <li>• Learn from those involved in the daily operations of the SFA and respect their perspectives and knowledge</li> </ul>

Table 8.1 (continued)

	Recommendations
Researchers	<ul style="list-style-type: none"> <li>• Investigate under-explored elements of students' eating behaviors at school, e.g. stigma related to class and income</li> <li>• Involve district-level and cafeteria meal program staff and students as informants in school meals research, especially using qualitative methods</li> <li>• Further explore the NSLP using tools and theory of public policy and administration research</li> </ul>

### Beyond the NSLP

In addition to benefitting from public administration and policy concepts, the NSLP also can offer lessons for these fields and the study of other public programs. Many of these findings will be relevant for school meals beyond lunch, namely breakfast, snacks, and supper, as well as the Summer Food Service Program. For other social programs related to food, the findings of this dissertation suggest value in using knowledge about food and eating behaviors to understand clients' reactions to the program. This may be especially applicable for the Special Supplement Nutrition Program for Women, Infants and Children (WIC), in which the clients, mothers with a low income, receive food benefits and are supposed to change how they feed their children to align with mainstream nutritional advice (Hand 2014). These mothers must take on certain behaviors for the program to meet its stated goal; however, clients' motivations and abilities to feed their children differently may not be so malleable. Exploration into the factors structuring clients' eating and feeding behaviors may suggest ways the program could be adapted to be more effective. Similarly, trying to understand recipients' eating behaviors and what contributes to them could also illuminate implementation of other

food-related programs like the Supplemental Nutrition Assistance Program (SNAP) and The Emergency Food Assistance Program (TEFAP).

Other programs for which co-production is an integral part of service delivery, such as education or health programs that require certain behaviors from beneficiaries, could also benefit from better considering the perspectives of both providers and clients. Seeing the value proposition from the eyes of the client may indicate where it differs from what providers attempt to offer. Reconciling these client and implementer perceptions could help create programs that offer a proposition that recipients are more likely to see as valuable. Implementers may be trying to maximize certain elements of the program that are less important to clients or failing to enhance the program offering in ways that would make it more appealing. Implementers may think they understand what they can do to influence clients to exhibit certain behaviors, but clients may be able to reveal more effective strategies. Such contributions reflect a role for clients as co-designers in implementation practices at the local level and potentially more formally as co-designers of program regulations and legislation.

Programs related to food and eating are likely not unique insofar as client behavior is influenced by diverse elements. Material goods exchanged or involved, the environment in which the service takes place, and personal characteristics of the clients are some of the factors that could affect clients' likelihood to co-create value. This dissertation indicates that even the structures through which individuals see the world (in this case, the paradigm of hegemonic nutrition) might cause differences in how



implementers and clients view the program's offering and thus the potential to create the value the program is designed to provide.

The policy actors who generate official legislation and regulations could better account for this reality of implementation within official policy documents. Recognition of the role of co-production would mean addressing more of the factors that influence clients and making it easier for frontline workers to do the activities that encourage desired behaviors. Explicitly involving clients and workers in the design of these policies and regulations (in the language of the public administration literature, moving from co-production to co-design), could be a way to achieve such alignment (Nabatchi, Sancino, and Sicilia 2017; Voorberg, Bekkers, and Tummers 2015). Policymakers could formalize the role of clients as co-designers of the policy process through legislation and/or regulations.

Further theoretical and empirical analysis covering different types of programs would advance understanding of co-production and could provide useful information to improve provision of public services. Literature on co-production focuses less on programs where co-production is integral to the service, more often treating co-production as an optional, add-on form of governance in which users provide feedback. Future empirical studies could explore clients' responses to value offerings in public services, especially for services that clients use on a regular basis and which rely on eliciting specific behaviors from them to be successful. Education is a prime example of this kind of program, and an understanding of co-production could benefit from using students as informants and taking seriously their perspectives and behaviors as co-

producers. Similarly, more research on the possibility of program clients, especially students, as co-designers of policy legislation and regulation could help facilitate their engagement in policymaking and implementation.

Such research can help refine how we conceptualize public services, especially those contingent on high levels of co-production by clients. Overall, this dissertation suggests that the crux of public programs is the value offering that staff provide and clients respond to. Policy outcomes are not created in a linear handoff of resources and responsibility from legislators to administrators to street-level bureaucrats, which clients eventually receive (Osborne 2018). Rather, we should see provision of public services as a moment of interaction between providers and clients, set within a bigger, broader ecosystem of influences on their activities (Trischler and Charles 2019). Conceptualizing implementation this way moves beyond the focus on either street-level bureaucracy or co-production literature; rather, it emphasizes the relationship between these two sets of actors as well as the reality of the situation as they interact. Accounting for all of these factors is necessary to clearly understand what causes implementation challenges and to address them effectively.

## Closing

What happens on the ground matters for public programs: the service that implementers offer and the reactions of clients determine exactly what the policy is and whether it achieves its desired outcomes. In the case of the NSLP, cafeteria staff create the program that students experience – details such as which sides are available, whether the food is hot, and how workers offer it are crucial elements of the meal

service. Students' reactions are also key to the delivery of the policy since their decisions around participation, selection, and consumption make the difference between a program in which students eat healthy foods at school and a program in which foods are prepared for the trash can. Frontline workers try to deliver a service that they think students will want, based not only in the policy regulations but also what they see in the program every day. Students will take them up on this offering only if they feel it will create value for themselves. If implementers do not understand what will encourage clients to co-produce, the entire policy process to create that service offering may be in vain.

As such, we must consider clients as well as workers as crucial to the policy process, with a major role to play in achieving policy outcomes. And we must also consider the myriad influences on their behavior and attempt to understand how these factors operate together, in particular places, to affect how school meal programs work. Actively engaging workers and clients in developing program policy and practices can illuminate these influences and strategies to shift them. Enhancing NSLP implementation will also require action from those who may not see themselves as involved in school meals, that is, the teachers, administrators, advocates, and policymakers with influence over some element of school lunch. But the ultimate change depends on the students, who in the end take a tray, wait in line, sit down, and eat (or do not eat) their lunch.

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## Appendices

Appendix I: Cafeteria Manager Interview Protocol

Appendix II: Student Group Interview Protocol



*PreK-12 School Food: Making It Healthier, Making It Regional*

**Cafeteria Manager Interview Protocol**

Name of School Food Authority (SFA):		
Name of School:		
Name and Title of Interviewee:		
Name of Interviewer(s):		
Observer(s):		
Date of interview:		
Start time of interview:		
End time of interview:		
Reviewed consent (circle one):	Yes	No
Agreed to recording interview (circle one):	Yes	No
Email address:		

- I. Introductory remarks (10 min)
  - a. *Thank participant for agreeing to participate in the interview*
  - b. *Introduce self, let observer introduce self; confirm title*
  - c. *Describe the Making It Healthier, Making It Regional case study project*
    - i. *PreK-12 School Food: Making It Healthier, Making it Regional* is a two-year project, conducted by School Food FOCUS in conjunction with Rutgers University, to study the impact of shifting public school food procurement to more healthful and/or more regional foods. The study will enroll six school food authorities (SFA) that have begun to purchase these types of foods. We'll be creating create six case studies and a summary report:
      1. Highlighting the complexities of school food change for large public school districts;
      2. Celebrating successes and sharing helpful practices with other SFAs; and
      3. Beginning to build the evidence base regarding:
        - a. The process involved in shifting school food procurement and

- b. Evaluating the ensuing impact.
    - ii. Do you have any questions about the study?
    - iii. *Explain the purpose of the interview, why the key informant has been chosen, and what to expect during the interview*
      - 1. The purpose of the interview is for us to gain a better understanding of the SFA's major procurement changes towards more healthful and regional foods since SY 12-13; what other elements of your meal program have changed as you've added those foods to the menu; and how some of your key stakeholders have reacted. We are particularly interested in your experience as the manager.
      - 2. We've invited you to participate given your inside knowledge, expertise and perspective on your district's food and nutrition service and the major procurement changes that have taken place.
      - 3. We'll ask you a series of open-ended questions. There are no right or wrong answers; we're interested in what you see as having taken place in the district over the past few years. We will be recording, if that's OK with you.
      - 4. Before we go any further, do you have any questions about the interview?
  - d. Review consent form
    - i. *Note:*
      - 1. *Information is confidential but employees may be noted by title in the final case study. The district, as well as specific individuals mentioned, will have the chance to review the findings and the final case study before it is publicized.*
      - 2. *We don't see any major risks; benefits include learning more about your district meal program and contributing to better understanding about school food.*
      - 3. *At the end of the interview, we'll offer you a \$25 gift card as a token of appreciation for your participation and the time you've given us.*
    - ii. *Give time to review consent form and sign*
  - e. Recording
    - i. *Confirm with the key informant that they are OK begin recording*
    - ii. *Turn on recording device*
- II. Warm up
- a. Could you tell me a little about the school? How many students are enrolled?
    - i. About how many lunches do you do a day? Breakfasts? Other meals?
    - ii. What is the free and reduced rate here?

- iii. What's the average breakdown of free, reduced, and paid meals that you claim?
    - iv. What's the ethnic breakdown like?
  - b. Tell us about what you do as the manager here.
  - c. How long have you been in this position?
  - d. What type of preparation do you do here? Finishing, production?
    - i. *Probe on prepping produce*
- III. Healthful and/or regional procurement changes
  - a. In your opinion, what does the district consider to be healthy foods?
    - i. *Probe on extent of agreement with the definition.*
  - b. What steps does the district take to serve foods it considers healthy?
    - i. When did those activities start?
    - ii. Have you noticed a change in how much attention the district pays to serving healthy foods over the last few years?
    - iii. Have you noticed any changes to what the district considers to be healthy or how they define it?
    - iv. In your opinion, why does the district pay attention to how healthy the food is?
  - c. What has been hard about serving healthier foods?
  - d. What has been surprising about serving healthier foods?
  - e. Can you describe a particular change, specifically to a healthier food that stands out? For example, something that was a particular success with students or that you now serve regularly or frequently.
    - 1. When a change like this happens, how are you notified? *Probe on the process.*
    - 2. Do you or your staff have the opportunity to give input when new products/menu items are introduced?
  - f. Can you describe a particular purchasing change to a healthier food that you attempted that was not successful?
    - i. What did you learn from that experience?
  - g. We're also interested in changes to serve more regional foods. How much do you feel like the district is interested in serving more regional foods?
    - i. In your opinion, what does the district try to purchase when it comes to "regional" foods?
    - ii. What steps has the district taken to serve more regional foods?
      - 1. When did those activities start?
      - 2. Have you noticed a change in the district's emphasis on regional foods since SY 12-13?
      - 3. In your opinion, why does the district pay attention to whether food is regional?

- iii. How do you find it out when a particular food you're serving is regional?
  - 1. Do you do anything special to advertise it, like put up posters?
- iv. What do you think has been the hardest part of serving regional foods?
- v. What has been surprising about serving regional foods?
- vi. Can you describe a particular change, specifically to a regionally sourced food that stands out? Similarly, some food that you had to figure out how to serve or was a particular success with students or that you now serve regularly or frequently.
- vii. Can you describe a particular purchasing change for a regional food that you attempted that was not successful?
  - 1. What did you learn from that experience?

#### IV. Overall changes

##### a. *Facilities/equipment*

- i. Over the last few years, what new equipment have you acquired? Have any major facilities upgrades taken place?
  - 1. Were any of these upgrades a result of needing to prepare more healthful/regional food items for meal service?
- ii. For any recent changes to your cafeteria's facilities or equipment:
  - 1. How was it determined what changes needed to be made? How was the final decision made? Who was involved in that decision?
  - 2. What challenges, if any, arose in the process?
  - 3. Do you consider the changes successful? Why or why not?
  - 4. Any unintended consequences?
- iii. What new equipment or facilities upgrades do you still want? How do you anticipate addressing these needs?
  - 1. Are you satisfied with the amount of space you have for:
    - a. *Preparation*
    - b. *Refrigerated storage*
    - c. *Frozen storage*
    - d. *Dry storage*
    - e. *Serving lines*

- b. In general, over the last few years, have changes in what your food and nutrition service department serves affected the day-to-day job responsibilities of the cafeteria staff?

##### i. *Probe on:*

- 1. *Different activities to prepare foods, e.g. processing fresh produce, less reheating*
- 2. *Increased training to learn culinary skills*
- 3. *More attention to receiving/storing foods*
- 4. *Longer hours*

- ii. *If yes:* How do you think staff members have reacted to these changes?
      - 1. *Probe on:*
        - a. *Enjoyment of cooking*
        - b. *Feeding kids better*
        - c. *More work/harder work*
    - iii. How long have your staff been working in this cafeteria?
      - 1. Do you have issues with staff turnover?
    - iv. How do you think your staff feel about how they are compensated?
      - 1. Do you have a formal process to recognize staff for good work?
      - 2. Are there opportunities for staff to advance?
    - v. Do you have an employee wellness program?
  - c. In general, over the last few years, have you noticed changes in the students' reactions to what is served in the cafeteria?
    - i. *Probe on reactions to new meal pattern*
    - ii. Do the students participate in any nutrition education or farm to school activities connected to food service?
    - iii. Do you coordinate your activities with a school wellness policy?
    - iv. Are there foods offered, through the meal program or otherwise, elsewhere in the school?
    - v. *If high school:* Is this an open campus?
  - d. Have you communicated to the students about healthier or more regional foods?
    - i. Are there some changes you make to certain items that you just don't tell them about?
  - e. Do you get feedback from parents? From the broader school community?
    - i. Do you communicate with them about healthier and more regional foods?
- V. Conclusions
- a. Is there anything that you'd like to share about the procurement changes we've discussed or anything else about your cafeteria in relation to serving more healthful & regional foods?
  - b. Can you suggest anyone else we should talk to or anything we should see while we're here?
  - c. Would you give me your email so that I can be back in touch to give you the opportunity to review the notes of our interview and ask you if I have follow-up questions?
  - d. *Thank the participant for their time and insight. Offer choice of gift card.*

PreK-12 School Food: Making It Healthier, Making It Regional

**Student Group Interview Activity**

Name of School Food Authority (SFA):		
Name of School:		
Grade level(s):		
Number of Students:		
Name of Facilitator:		
Observer(s):		
Date of activity:		
Start time:		
End time:		
Group agreed to recording interview:	Yes	No

*Approximately 60-75 minutes; 6-8 students.*

- I. Introductory remarks (10 min)
  - a. *Thank students for being there*
  - b. *Introduce self, let observer introduce self*
  - c. *Describe the Making It Healthier, Making It Regional case study project*
    - i. We're working on a project looking at school food and what certain schools and districts are doing to improve their breakfast and lunch programs. Six different school districts, in six different states, including here in [insert location] are part of this project. In addition to you all, students from Florida, Georgia, Iowa, Kentucky, South Carolina, and Virginia are taking part in the same activity as we are today. At the end of this project, we will create and share reports about what each district is doing, which should help other school districts and people who want to improve school food learn from schools like yours.
    - ii. Does anyone have any questions about this project and why we're here today?
  - d. *Explain the purpose of the interview, why they have been asked to participate, and what to expect during the activity.*

- i. Obviously, one of the most important parts of school meals is the students who eat them - you all. We're really interested in knowing what you think about the meals here at [insert name of school]. So today we'll be asking you for your thoughts about the food, the cafeteria and other elements of the meal program.
  - ii. We will start with a short activity, asking you to write or draw your answers to a few questions. Then we'll all talk together about what you put.
  - iii. There are no right or wrong answers; we're just interested in what you think as a student here. You don't have to answer any questions that you don't want to. Everything you say will be kept confidential – that means the research team are the only ones who will see any notes about what you say here. If we want to use something you say in a report, we won't use your name or anything about you beyond your school district and grade.
  - iv. Does anyone have any questions about what we are doing today?
  - v. Is there anyone who doesn't want to be involved? *Pass out student assent forms; give them a few minutes to read and sign.*
  - vi. We would like to audio record today's conversation if that's OK with all of you. We, the research team, will be the only people who listen to the recording. Does anyone prefer if we do not record?
  - vii. *Ask them to turn off their phones.*
- e. Recording
  - i. *Confirm with group that they are OK begin recording*
  - ii. *Turn on recording device(s)*
- II. Warm up questions *[Ask each student individually] (10 minutes)*
  - a. What's your name & age? *[Also ask grade if not all the same]*
  - b. What did you eat for lunch today/yesterday?
  - c. In a typical week, how often do you go through the lunch line at school? We're considering "lunch" as more than just a snack like chips or a drink.
    - i. *[For HS students]* If you don't eat school lunch, what do you do for lunch instead (e.g. bring lunch, go off-campus, buy from vending machines, don't eat)?
  - d. Three words to describe what you think about eating lunch at school.
- III. Activity *(15 minutes)*
  - a. *Hand out packet with questions, colored pencils, pens to students.*
  - b. *Explain activity:* We're going to ask you a few questions. Please draw your answers. Feel free to add words in if you'd like, for example, if you want to label something. *[If there is push back on drawing, let them write instead.]*

Remember, there are no right or wrong answers; just put down whatever you think or feel. You'll have about three minutes to answer each question. [The observer] will be keeping track of the time, so please try to draw as much as you can in the three minutes.

- c. Question 1: What do you usually eat for lunch? Tell us whether you usually get it at school or from home.
- d. Question 2: What does a school lunch usually look like? What foods would you expect to see in it?
- e. Question 3: What does a healthy lunch look like? What foods would you expect to see in it? *Clarify that it isn't necessarily a school lunch.*
- f. Question 4: What is your cafeteria like during lunch? Who is there, what do you see when you go through the lunch line, what does it sound like?
- g. Question 5: What are your favorite things to eat at school?

IV. Discussion areas of interest (20 minutes)

- a. Now we're going to talk about your thoughts and feelings about school lunch. I'll ask you questions about what you draw or wrote, but you can also say anything else you think or feel, even if you didn't put it on the paper. Remember, there are no right or wrong answers – we just want to know your opinions.
- b. *Knowledge & perception of healthy/regional foods generally and in the cafeteria*
  - i. What are some of the foods that you drew or wrote about that are part of a healthy lunch (question 3)?
  - ii. Are these foods part of your typical lunch? Did you put any in the answer you gave for question 1?
    - 1. Do you like to eat these foods? Why or why not?
  - iii. Did you include these foods as part of the regular school lunch you drew or wrote about in question (2)?
    - 1. Do you like to eat these foods? Why or why not?
    - 2. *Ask about particular items of interest, e.g.* Did you include any collard greens?
  - iv. When I say a food is "local," what does that mean to you?
    - 1. Your district defines local as "[insert district definition]"
  - v. Are there any local foods in any of the lunches you drew?
  - vi. Does your cafeteria serve foods that are local?
    - 1. Do you know where the foods in your cafeteria come from?
    - 2. Does that matter to you when you're choosing what to eat?
- c. *Perception of school meals and school meal requirements*



- i. What did you put in your drawing about the typical school lunch (question 2)?
    - 1. How do those foods taste?
    - 2. How do those foods look?
  - ii. Are there certain foods that have to be in the typical school lunch?
    - 1. Do you know why that is?
  - iii. Have you noticed any changes in what the cafeteria serves since you've been in school?
    - 1. *Ask about specific changes in the district*
- d. *Cafeteria environment*
  - i. What did you put in your drawing about the cafeteria (question 4)?
  - ii. What does the food look like when you go through the lunch line?
  - iii. Are there any people in your response? Anyone who works in the cafeteria?
    - 1. What is your relationship like with the people working in the cafeteria?
- e. *Stigma of school lunch*
  - i. How do you decide whether or not to eat lunch at school?
  - ii. What are some reasons you hear why other kids do not eat school food?
- f. *Preferences*
  - i. What did you put as your favorite things to eat for lunch (question 5)?
    - 1. Are any of those things served at school?
  - ii. What is your favorite thing about school lunch as it is now?
  - iii. What would you most like to change about the foods at lunch or your experience in the cafeteria?
  - iv. Would you like to be able to give more input on the foods they serve at school?

V. **Wrap-up**

- a. Is there anything that you'd like to share about what you think about meals at school?
- b. *Collect writings/drawings.*
- c. *Thank them for participating.*